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"Scire est nescire, nisi id me
Scire alius sciret."

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EARLY HISTORY OF THE BRISTOL ROYAL INFIRMARY.[1]

BY

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SATURATED as I am with the traditions of the Bristol Royal Infirmary, after thirty-two years of work there, I think, perhaps, I might interest you to-night if I speak on "Some points in the early history of that grand old institution, the Bristol Royal Infirmary."

My friend and colleague, Mr. W. H. Harsant, in the year 1899, gave a most interesting address on "Medical Bristol in the Eighteenth Century,"[2] and at the end of this address it was freely remarked that it might have been longer, which I should consider a great compliment if accorded by my audience to this humble effort of mine.

In the year when Cheselden was living in Queen's Square, Westminster, with Alexander Pope as a patient in his house, when he was gradually bringing about the separation of the barbers from the surgeons, and vigorously working at dissection

[1] Presidential Address read at the annual meeting of the Bath and Bristol Branch of the British Medical Association. May 27th, 1908.

[2] *Bristol M.-Chir. J.*, 1899, xvii. 297.

on the bodies of malefactors ; when George II. was king ; at this date, in 1735, was founded the Royal Infirmary. Bristol thus claims the honour of having set to the whole of Great Britain the example of a provincial infirmary supported entirely by voluntary contributions. Previous to this nothing of the kind had been attempted out of the Metropolis, as may be seen by the following enumeration of these charities, with the dates of their foundation :—[1]

Bristol	1735	Shrewsbury	1747
Winchester	1736	Liverpool	1749
Edinburgh	1736	Worcester	1749
York	1740	Newcastle	1751
Exeter	1743	Manchester	1752
Northampton	1743		

That it appears to be the oldest provincial hospital must appeal to the imagination of all interested in the rise of our profession ; for there can be no doubt that the formation of these institutions was one of the greatest factors in the progress of medicine and surgery.

To many of us the mere age of the place and the numberless associations it has with the history of Bristol, to say nothing of the fact that our forbears were either subscribers, or sat on the Committee, or acted on the Staff, is sufficient to awaken the greatest veneration for it.

How many men, long since dead, have worked with heart and head and hands for the Bristol Royal Infirmary ! Numbers of these are forgotten ; but thanks to one character, who stands out distinctly in the history of the Infirmary, we have a unique set of records which are full of absorbing interest to the antiquary, and which throw much light on the state of medicine in the eighteenth and nineteenth centuries. This historian was RICHARD SMITH, who was Surgeon to the Infirmary from 1796 to 1843, a lifetime.

He left fourteen portly volumes of scraps, newspaper cuttings,

[1] These dates are copied from Richard Smith's "Biographical Sketches."

portraits and gossips; from the two earliest of these volumes I have extracted small portions.

He was a man who was wrapped up in the Infirmary, and although he always did his best for the welfare of the *individual* patient at that Institution, he never lost sight of the very important duty of working for the Infirmary as a whole, a duty in these present days of increasing "individualism" that is, alas! sadly tending to diminish.

Dick Smith was a man of great virility and strength, fond of society and good wine, a great Freemason, ready to quarrel, but full of pluck and life, and ever ready to stand up for his colleagues.

The origin of the "Biographical Sketches" made by Dick Smith is due to the fact that in the year 1791 he was going round the wards with the Senior Surgeon (Mr. Godfrey Lowe) when he observed in the hands of a nurse a parcel of papers intended for the common uses of the ward. He was surprised to find that they were official letters addressed to the Governors of the Charity. He questioned her as to the means by which she obtained them, and was answered very coolly: "Where we get them all from, the old ward." Curiosity led him upstairs, and there on the floor of a deserted and ruinous garret were piles of papers, which proved to be the documents respecting the Institution from its very commencement.

The records of the General Boards and Committees were likewise thrown about, and equally liable to the depredations of the servants and patients.

Dick Smith goes on to say that "my maternal blood of the Calcotts was not a little shocked at this shameful neglect of original MSS., and although the Managing Trustees appeared to consider them of no value, I felt a regret to see them consumed by such vile uses, although as Spenser says:

> "'True it is, that when the oyle is spent
> The light goes out, and wick is thrown away.'

I determined, therefore, to make some memoranda from the books, that in case of their destruction the dates of the Society's Transactions might not be utterly lost; for this purpose I carried

home to College Street the General Board and Committee Books, and at my leisure made such extracts as I wished."

Dick Smith we know was no respecter of persons, and he seems to have retained these books in his possession till September, 1794, without any inquiry being made for them, and it is perhaps lucky for us that the Institution had then a Surgeon of such determination, as it seems quite possible that if it had not been for him the greater part of our records might have been lost for ever.

Dick Smith appears also to "have *preserved*" (I will not use a stronger word) many original documents, particularly some relating to the chaplaincy, which shows us that even at this early date there was a close relationship between the healers of the soul and the healers of the body. These *borrowed* papers, together with curious old memoranda, given him by Mr. Edward Ash, Mr. Beck, Dr. T. W. Dyer, Dr. Plomer, Mr. Godfrey and Mr. Richard Lowe, enabled him to build up some of this early history.

The founder of the Infirmary was JOHN ELBRIDGE, who was Comptroller of His Majesty's Customs in Bristol, born at St. Anne's in the Island of Jamaica and not at the Fort, Bristol, as is generally supposed. In the year 1735 he undertook to establish the Infirmary. This he did by building two wards and furnishing them. He died February 22nd, 1738, and left £5,000 to the Institution. During his lifetime he built in his garden a school for poor girls, and left money in his will to keep this up. The "master of this school has for ever the right of sending any scholar when sick or wounded for advice, etc., by giving her a note signed Elbridge, when she is to be admitted immediately without waiting for the regular forms used by other patients, and without waiting for the proper 'take-in days.'"

A curious circumstance is that the grandson of the founder, named GEORGE ELBRIDGE ROOK, applied on March 28th, 1778, as a pauper, and was taken in by Mr. Richard Smith, senior, who amputated his leg; and in the year 1796 a descendant of the great Edward Colston became a patient at the Infirmary, and was the first patient upon whom Dick Smith performed amputation of the leg.

With regard to *practice*, *prescriptions*, and *prices*, it is interesting to notice that the first entry of all in the first volume is a bill:

April 7th, 1736,
Madme. Mountjoy to Jas. Bush
for two Cordials. 3/8.

which I notice was paid as soon as April 17th, 1736. I wish I could get my accounts paid as quickly as it appears some of my ancestors did in these early days.

It can here be mentioned that Parliament actually purchased of a Mrs. Stephens, at the cost of £5,000, a remedy for the solution of stone in the bladder. When this expensive recipe was afterwards published, it turned out to be "snails burned to blackness, camomile flowers, sweet fennel, parsley, and the great burdock root"; and in the year 1739 a munificent donor purchased from the said Mrs. Stephens, for the use of the Infirmary Staff, the recipe of this "precious cure" for £3 3s. od., which was rather a falling-off from the sum paid by Parliament; but history does not relate how many calculi were dissolved by it, or how many patients were cured of their symptoms of stone at that Institution. Other "potent" drugs ordered freely in Bristol about this date (1744) were the *Toad's Powders*, which were supposed to be a cure for many ailments of men and women. They were prepared thus: "Take live toads and dip them in oil of soot, then burn in a pot with moderate heat, and pulverise."

Dr. Long Fox[1] is stated by Mr. Smith to have said: "When I came to Bristol, in about 1786, it was the practice with most of the regular physicians to wrap up the legs of patients in hot bullock's lights (lungs), and apply a pigeon split, and hot, to the soles of the feet."

Mr. Broderip, an apothecary, who practised medicine and surgery in Bristol, is stated by Dick Smith to have booked in the year:

	£
1796	5,993
1798	6,931
1799	6,845

[1] The grandfather of our recently deceased colleague.—ED.

These were the *golden* days of physic, more especially when we call to mind that there was no shilling in the pound Income Tax, and when butcher's meat was only 2d. to 3d. a pound.

The great Bristol families in these days were so wrapped up in their own particular medical men, that they could not go away for a holiday without a regular supply of physic; and the records show that the family of Greenbys were supplied on one of these occasions by Mr. Broderip with 200 tonic draughts and 1000 pills of various descriptions. His assistant is reported to have said that "he was sick to death with a-rolling of 'em." If a draught was sent the charge would be 1/6, but if it contained musk an additional charge of 10/6 was made. One of Broderip's patients lived at Rochester, to whom he dispatched monthly by stage coach a packet of draughts containing one drachm of Tinct. Cardamom Co. and one ounce of Aqua-pump-aginis.

About 1805 the Bristol families began to find out that it was better and cheaper to go to one of the first-class physicians, and these gentlemen no doubt explained that if they alone were employed there would be no inducement to order such loads of apothecary's stuff, and that their medicines would assume a more compact and diminished form, and that they would pay less, and be spared the necessity of swallowing so many nauseous drugs. This change of fashion no doubt led to the starting of the dispensing druggists, who set up business in splendid shops in Bristol about this period, and who not only advertised the fact that the drugs they dispensed were pure, but also the fact "that a physician attended at their shops regularly at certain hours in the morning and evening and gave his advice *gratis*."

Excessive bleeding was much in favour in these early days of the Infirmary. It is reported that the celebrated physician, Dr. J. C. Prichard, of the Red Lodge, and grandfather of your President of a few years ago, who was Physician to the Infirmary in 1816, during one week ordered 96 out-patients to be "blooded," while out of 21 patients admitted under him into the Infirmary, no less than 20 required to have the strong Bristol beer let out of them in this way.

It was at the place of business of the old barber surgeons

that some of the earliest of the Infirmary surgeons were educated, and there is no doubt that they had a fine experience of blood-letting, drawing teeth, and in the making-up of tinctures and pills.

The visitors, from the foundation of the charity, were a kind of sub-committee appointed to visit the wards and look into the general working of the Institution. I reproduce the first entry in the "Visitor's Records," dated December 19th, 1737; it is the following:—

> "Examined the beer and find it not good enough for the price."

It is not stated how the visitors examined the food and drink, but I notice that on January 1st, 1738, J. Bush—evidently the same gentleman previously mentioned—performed his duties satisfactorily, and signed the book. The writing is very shaky, but perhaps this is due to the *date* of the visit.

JOHN PAGE, Surgeon to the Infirmary, 1741—1777, lived in an imposing house in Redcliffe Street, was author of various medical books, a rapid operator, and was held in great esteem by most of his fellow-practitioners. There was a report about him that he often removed fingers and toes with a carpenter's chisel and mallet, and that when he was about to operate the students used to ask one another if they were going to see "Old Johnny" play at hammer, chisel and block!"

There is no doubt that as a lithotomist he was skilful and successful, having cut more patients for stone, both in private and in the Infirmary, than any surgeon of his time in Bristol. He was the first in Bristol to practise the lateral operation. Surgeons in these days had to bring their own forceps, and his were not always of the latest pattern. As he completed one day one of these brilliant operations, the *junior* surgeon present (whose duty it was to hold the patient's legs and not to talk) said to him, "You will be retiring soon, sir, will you not? When you do, you must make us a present of your forceps, for I believe they know the way into the bladder of their own accord." This remark might be taken in two ways. Dick Smith gives the

junior the benefit of the doubt, and puts it down to the spontaneous effect of the pleasing sensation which all the bystanders, in common with the patient and the operator, feel at the sight of the stone.

JAMES FORD, Surgeon to the Infirmary, 1743—1759, son of Canon Ford of Wells, a Bristol student of medicine, was a man of considerable talent and fascinating manners. Ford was making his mark as a surgeon in Bristol when he attended Lord Bute, the Premier, who was taking the waters at Hotwells. Lord Bute persuaded him to leave Bristol and go to London, where in 1788 he was honoured by Queen Charlotte, the wife of George III., nominating him to be her physician. The Royal Warrant is bound up with Dick Smith's "Records." He became one of the leading men in London and made a considerable fortune.

He was a friend of David Garrick and Sheridan, and in conjunction with Lindley and Sheridan purchased for £35,000 Garrick's share in Drury Lane Theatre. Lindley was unwilling or unable to make good his payments, and Sheridan brought no money into the transaction, so that poor Ford lost his fortune.

I have found the following anecdote. Soon after Dr. Ford had made the purchase from Garrick, the King saw and asked him if it were a fact? Dr. Ford replied, "Yes, may it please Your Majesty." "Oh, yes," replied the King, "it pleases me well enough, quite right, quite right, all very proper and appropriate, for Charlotte *assures* me that you are quite at home behind the *curtain*."

James Ford on retiring from Court practice was able to get his brother John appointed, and so Bristol was for a second time honoured by the King.

John was Surgeon to the Infirmary from 1759—1775, when he was made an M.D. by the Archbishop of Canterbury.

The following correspondence is of interest:—

ALBERMARLE STREET,
February 23rd, 1771.

GENTLEMEN,

It being my intention to give my son an introduction to my own business, it will be necessary for him to finish his education

in London and abroad, and as that will take up a considerable time, it will be much to his advantage if he can be permitted to leave the Infirmary at the expiration of his *sixth* year. I therefore humbly request this indulgence of you, which will greatly add to the favours you have already conferred on him.

Gentlemen,

Your most obliged and most obedient servant,

J. FORD.

This letter shows how highly esteemed the Infirmary was in 1771, as here we have such a noted man as James Ford, physician to George III., sending his son to Bristol to receive the first six years of his medical studies, these to be followed by special courses in London and Paris. In another letter the father states, "I feel sure that at the Bristol Infirmary he will learn nothing that hereafter I shall wish him to forget."

And again, "From the general knowledge I have of the great hospitals, and the thorough one I have of yours, I know he cannot be better placed than there."

It also shows us that the usual period of training for a medical student in those days was some seven or eight years.

This letter shows what the son thought of the Infirmary:—

GENTLEMEN,

I cannot quit this place without returning you my thanks for the many civilities you have shown me during the course of my apprenticeship, and the advantages I have reaped there under your countenance and protection, and I beg leave to assure you that I shall always rejoice at promoting the interest of this excellent Infirmary, endeared to me as it will always be by a remembrance of the many happy hours I have spent in it, and the *genteel behaviour* I have ever experienced from each individual belonging to it.

I have the honour to be, gentlemen,

Your much obliged and very humble servant,

JAMES FORD.

INFIRMARY,

September 18th, 1772.

JEROME NORMAN, Surgeon to the Infirmary, 1755—1762. It was between these dates that at a consultation at the Infirmary Norman proposed to amputate a leg at the hip-joint for hip-joint disease. All the other surgeons were so horror-struck at the very suggestion of such an operation, that they refused to give their consent, and so the patient was allowed to die without a chance being given him. We have, therefore, to lament the fact that Bristol did not have the privilege of being the first to perform this major operation, as it was not till the year 1776 that Mr. Thompson actually performed it in England.

JOHN CASTELMAN, Surgeon to the Infirmary, 1755—1779, was a well-bred gentleman. His father having lost some £40,000 in the South Sea Bubble, the son had to make his own living. He lived in Prince's Street. He had a hard fight to get on the Staff, and the election was one of the fiercest on record. The Press teemed with letters and communications, some extolling the various virtues of one or other of the six candidates, but many full of the most low and personal scurrility. It was freely advertised that one candidate was filling the streets of Bristol with "wooden legs," and that another had cured many cases which had been dismissed from the Infirmary as incurable.

Castelman was, however, elected by the small majority of twelve votes. It was this gentleman that made the somewhat offensive remark with regard to the operative powers of Mr. John Page already referred to.

It does not appear that his surgical abilities were of a high order. He is reported to have been a man who was content to let the art of surgery remain where he found it. He was a man of no nerve, and in operations which were not absolutely commonplace he was frequently foundered, and his colleagues had more than once to finish an operation for him.

WILLIAM BARRETT served his apprenticeship time to old Rosewell, the barber-surgeon, where also many noted medical men of Bristol commenced their training. He was an unsuccessful candidate when Castelman, Townsend and Norman were elected in 1755. He practised surgery and midwifery in the city with the highest reputation for professional skill. His health gave way

under the strain of his profession, and he retired to Wraxall about 1787 to write the *History of Bristol*, a well-known work. It was to Barrett that Chatterton applied for a certificate of his abilities to go to Africa as a surgeon, but as Barrett refused this certificate, the unfortunate young man (Chatterton) did not forget him when he wrote a poem in 1770 upon the profession in Bristol.

Old SAM PYE, whose "home-bred documents" are sneered at by Chatterton in the poem referred to, belonged to a family which without any interruption may be traced as practising surgery in Bristol for at least a century before 1759.

The description of him is this: "He was a man who, by his experience, successful operations, and peculiar sagacity of genius in treating the more obscure diseases, advanced surgery and midwifery to its greatest height." He died in 1759, aged 74 years.

There were numerous *Sam* Pyes, fathers and sons. One of them wrote a book on lithotomy; many of them were candidates for the post of surgeon at the Infirmary, but none were elected.

Dr. EDWARD LYNE, Physician to the Infirmary, 1758—1772, was the first to advocate "Bristol milk." He described it as "a generous wine from Lisbon," and of which he partook one bottle always for dinner each day.

As far as I know, he was the first Bristol man to become a pure consultant, and I believe he always refused to see any patient after 2 p.m.

He was an alderman of the city, and his mode of thinking of his personal comfort and convenience is shown by his letter of resignation. He says:—

GENTLEMEN,

The Infirmary interferes so much with my private affairs that I cannot possibly attend to all. I therefore resign, and am

Your obedient servant,

EDWARD LYNE.

THE INFIRMARY IN 1762.—In-patients admitted 1,157, and 386 were refused admission for want of room. Average number

of patients in the house 132, not including a large number which were placed in lodgings at the expense of the Infirmary. Of these 717 were cured, and 103 died during this year.

In 1781 the foundations of the present building were laid. In 1788 the east wing was completed, and in 1805 £10,000 was collected for the west wing. In 1850 the Infirmary obtained the permission to call itself the Bristol Royal Infirmary.

It is clear from these records we had to wait from 1735 to 1805 before there was sufficient money to build a suitable Infirmary for such an important city as Bristol. There was during these years heaps of money in the old port. I notice that the merchants on one day in 1745 subscribed their names to sums amounting to £40,000, to repell a large body of Highlanders led by the Pretender's son, and in July of the same year the contents of two Spanish prizes taken I expect by Bristol ships, and valued at just under a million pounds sterling, were lying in Bristol and afterwards sent to London. Some of this might, in my opinion, have been devoted to the Bristol Infirmary.

By a note February 21st, 1739, it appears that the Infirmary was in the habit of paying various sums, such as 4/6 or 2/6, for carrying patients to their place of abode, thus showing that even at this early date patients came from a considerable distance. On March 17th in the same year 5/- was paid to carry James Bruan to Salisbury, his place of abode.

Mr. LUDLOW was a very noted man, for at the election of 1766 for *one* surgeon Mr. Ludlow received 146 votes and Mr. Thomas Stone 147 votes. A recount was demanded by Mr. Ludlow, and after much uproar the chairman stated that Mr. Ludlow had 147 and Mr. Stone had 146 votes. A third count was demanded. While this was proceeding the two sides came to blows, the voting papers were upset and some lost. What was to be done ? The rules said they must that day elect, and the rules also said only one must be elected. The chairman (Sir Abraham Elton), however, ruled that they were both elected.

The records state that at this election a certain doctor gave such drastic medicine to three of the supporters of Mr. Ludlow that they were unable to vote ; while a supporter of Mr. Stone

during the count was perceived to make an attempt to secrete a voting paper in his hat.

Mr. Ludlow got into great trouble with the physicians for treating medical cases without an M.D. degree, in fact he was prosecuted in the courts by his colleague, Dr. Rigge, for so doing. The case ended, I find, by his obtaining an M.D., and the following words occur :—

"The Jury being satisfied of his great abilities as a medical practitioner, did not enquire whether he had sent for it by post from Scotland, or whether like his opponent he had walked for it to Padua."

Dr. RIGGE, Physician, 1767—1777. Dr. Rigge had only been elected a few years when he requested Mr. John Page, who had been a surgeon there for thirty years, to bleed a patient himself. John Page sent his dresser, and so the row began.

He created a great ferment in the Infirmary by trying to persuade the General Board that the surgeons should not admit cases without the consent of the physicians. Dr. Rigge also maintained that the surgeons should not perform any major operations without the consent of the physicians.

A row over the apothecaries caused Mr. Richard Smith to challenge Dr. Rigge to fight on Brandon Hill. They met, and were about to fire, when the seconds advanced and made one more appeal to prevent bloodshed, as each medical man had a wife and family. The duel was prevented, Dr. Rigge made an apology, but both parties held a sullen reserve towards each other ever after.

The following letter ends the career of Dr. Rigge at the Infirmary. It reads thus :—

BRISTOL,

February 18th, 1778.

GENTLEMEN,

During Mr. Bridges's lifetime it was a pleasure to attend the Infirmary, but since we unfortunately lost him, there has been great disorder, and confusion, collusive innovations, &c., and as the discord and difference of opinion, still subsisting among the gentlemen of the House, afford but little prospect of putting it

upon a more respectable footing, I therefore resign my office, and am,

Gentlemen, your most humble and most obliged servant,

THO: RIGGE.

Complaints against members of the Staff were recorded. This is of interest as showing that 130 years ago patients, who paid nothing for their treatment, were then just as ready as now to bring false accusations against the Staff.

The diet table of 1785 is very interesting. With regard to common diet, it was only on Monday nights the patients were provided with *nightmare* in the form of cheese for supper.

In the low diet *panado* is bread soaked in water, *pippin* I suppose is apple and water, *cyder whey* is always excellent, and *baum* is evidently *balm*, of which John Evelyn says: "Balm is sovereign for the brain, strengthening the memory, and powerfully chasing away melancholy."

I notice how largely *beer* entered into the diet of these days, as in common diet, although meat was only allowed on two days of the week, four glasses of beer *per diem* were given to each patient.

An interesting caricature was freely circulated during the election of 1781. It shows "knock-kneed Billy" introducing Mr. Richard Smith, senior (the grandfather of Dick Smith) to the Devil. He says: "Here is our staunch friend Dick, the surgeon, who wishes to be introduced to your Infernal Majesty." The Devil replies: "My dear knock-kneed Billy, I have long known the merit of this cutter and slasher." Someone questioned at the time whether the caricature of Dick Smith was meant for him, as he did not appear to be opening his mouth (Smith being a great talker).

I cannot close without expressing my indebtedness to Dr. Newman Neild for his kindly assistance in the preparation of the numerous lantern photographs of early physicians and surgeons in the costumes of the day, as well as reproductions by the same method of diet cards, admission cards, Royal warrants, views of the Infirmary buildings, and election caricatures.[1]

[1] The address was rendered most interesting by the exhibition of many pictures, of which we reproduce one, the portrait of Richard Smith.

A STUDY OF TEN CASES OF OPERATION FOR PERFORATED GASTRIC ULCER.

BY

CHARLES A. MORTON, F.R.C.S.,

Professor of Surgery in University College, Bristol; Senior Surgeon to the Bristol General Hospital and the Royal Hospital for Sick Children and Women; Consulting Surgeon to the Cossham Memorial Hospital.

I FIND, on looking up my records, that I have operated on ten cases of perforated gastric ulcer, with seven recoveries, and I propose in this paper to give a brief abstract of them,[1] and to point out the lessons I have learnt from them.

As we might expect, the chance of recovery depends very largely on two things—one, the time which elapses between perforation and operation, and, the other, the extent of extravasation of stomach contents. The following table by Robson and Moynihan[2] shows the relation of the result to time of operation:—

	Total Cases.	Recovered.	Died.	Mortality.
Operation under 12 hours ..	49	35	14	28.5
,, from 12—24 hours	33	12	21	63.6
,, from 24—36 hours	16	2	14	87.5
,, from 36—48 hours	2	0	2	100.0
,, over 48 hours ..	33	16	18	51.5

But it seems uncertain whether these statistics are taken from consecutive series of cases. If not, they will almost certainly fail to give the real mortality, for single fatal cases do not as a rule get published. Paterson found that in a series of consecutive cases[3] operated on within twelve hours the mortality was 47 per

[1] It is a curious fact that I had been Surgeon to the Bristol General Hospital for seven years before I operated on my first case of perforated gastric ulcer.

[2] *Diseases of the Stomach*, 1901, p. 161.

[3] *Lancet*, 1906, i. 575.

cent., within twelve to twenty-four hours 50 per cent., and from twenty-four to forty-eight hours 83 per cent. The difference between his first and second periods of twenty-four hours is therefore very marked.

All my three fatal cases had general peritonitis. In one thirty-nine hours had elapsed between perforation and operation, in another forty-nine, and in the third three days; but one of the successful cases (Case 3) was not operated on for thirty-nine hours after perforation, but in this case the extravasation was slight, and the peritonitis localised. In two of these three cases the patient was in a very collapsed state before operation, and the third died nearly three months after operation, and some time after a subphrenic abscess had been drained.

The mortality after operation for perforated gastric ulcer has been considerably reduced in the last few years, owing perhaps to earlier diagnosis. Mr. Crisp English[1] found that only 52 per cent. recovered out of forty-two consecutive cases at St. George's Hospital up to 1903; and Mr. Sargent[2] gives 58 per cent. recoveries in forty-nine cases at St. Thomas's Hospital up to 1904. Mr. Moynihan's results, published in 1906,[3] are much better—66.6 per cent. recoveries in twenty-seven cases; and Mr. Crisp English and Mr. Turner together, at St. George's Hospital, had nine cases with only one death. In my ten cases the recoveries were 70 per cent.

Diagnosis.—The diagnosis of several of my cases was not difficult, but it is worth while calling attention to what has been called the "latent period." The symptoms of onset may be most acute, and then in a few hours there may be so little pain that you are put off your first diagnosis. In Case 4 the diagnosis was much less certain when we saw the patient just before operating than it seemed earlier in the day, but fortunately we decided to operate. In other cases in this series it will be noted that the severe pain had passed away before I saw the patient. But in the latent period the rigidity will usually persist, and also a certain

[1] *Med.-Chir. Trans.*, 1904, lxxxvii. 27.
[2] *St. Thomas's Hosp. Rep.*, 1904, xxxiii. 477.
[3] *Med.-Chir. Trans.*, 1906, lxxxix. 471.

amount of tenderness, though the frequency of the pulse may lessen.

In two of my cases appendicitis was diagnosed (Cases 5 and 7). In Case 5 the tenderness and fulness were most marked in the appendix region, and in Case 7 the history was that the pain had been there. This is not at all an uncommon mistake, especially with perforating duodenal ulcers—indeed, with the latter it is quite frequent. Extravasated fluid runs down into the right iliac region in these cases, and peritonitis is marked there. The mistake matters really very little, provided we operate, for we can easily extend our incision in the rectus up to the stomach region; but the fact that in nineteen out of fifty-one cases of perforated duodenal ulcer collected by Moynihan a diagnosis of appendicitis was made, is an additional argument in favour of early operation in all cases diagnosed as acute appendicitis with severe symptoms at the onset, at any rate in adults.

It seems to me that rigidity of the abdominal wall is one of the most important signs of perforated gastric ulcer, though when general peritonitis was present in Case 8 there was neither rigidity nor tenderness, but the patient was in a very collapsed condition.

In connection with the diagnosis of perforated gastric ulcer, it may be well to call attention to a source of error pointed out by Moynihan.[1] He says he knows of three cases in which negative exploration for perforated gastric ulcer was performed in women at the commencement of menstruation. Sharp abdominal pain, with vomiting, distension, and collapse were the symptoms and signs present. In one of his own cases (in which he did not explore) the absence of any rigidity and tenderness in the abdomen negatived perforation. There may be a history of previous similar attacks at menstrual times.

We must not fail to diagnose a case as one of perforated gastric ulcer because shortly after the onset of symptoms shock is not present. In one of my cases (Case 9) I saw the patient one hour after perforation; his pulse was 112, not very bad, nor did his general condition suggest collapse. Neither was Case 1, see a few hours after perforation, suffering from collapse. Moynihan

[1] *Abdominal Operations*, 1906, p. 144.

says[1] that within the first two hours, though the pain is very severe, there is no rigidity or collapse, or any marked rise in pulse rate. However, in one case I saw an hour after perforation the whole abdomen was very rigid, and I believe collapse may be very marked. Mr. Pearce Gould[2] refers to a case of sudden death from the shock of perforated gastric ulcer.

Treatment.—The method adopted for cleansing the peritoneal cavity differed in the successful cases—in some I sponged, and in others I flushed. If the extravasation and effusion of fluid and lymph is localised, it seems to me that it is unwise to risk further dissemination by flushing. In cases in which extravasation or inflammatory effusion is widespread, especially if stomach contents are widely diffused, perhaps flushing is the more satisfactory method, as there is less manipulation, and therefore less tendency to shock, and I should expect the cleansing to be rather more thorough than with sponging, if plenty of saline solution is used;[3] but I have learnt from my experience of the treatment of diffuse peritonitis from appendix disease how well most cases do after sponging, and unless there were evidence of very wide—almost general—diffusion of infective material, there is a risk of infecting fresh areas in flushing. Paterson[4] is opposed to irrigation, because he has observed when giving the anæsthetic that if the patient was not very deeply under, when flushing was used there was weakening and quickening of the pulse. But he does not tell us if he has observed the effect of sponging on the pulse. He only recommends sponging of the space "above and behind the liver." He suggests sucking out the fluid from the pelvis. He avoids sponging, because he thinks it will interfere with peristalsis after operation, and he seems to depend more on the action of purgatives after operation to cleanse the peritoneal cavity than on flushing or sponging at the time of operation. I should rather still be inclined myself to act on advice given by Pearce Gould more than ten years ago—not only to operate early, but to spare no pains in thoroughly cleansing the peritoneal cavity.

[1] *Brit. M. J.*, 1906, ii. 1397. [2] *Ibid.*, 1894, ii. 860.

[3] I see this line of practice is recommended by Mayo Robson. *Brit. M. J.*, 1906, ii. 1347.

[4] *Loc. cit.*

If the intestines have to be turned out of the abdomen in order to get room to flush, then I think there would be greater shock with flushing than with sponging; but then sponging without evisceration would probably not be effectual in cleansing the peritoneum because of the tight packing of the intestines.

In all the eight successful cases of Crisp English and Turner[1] irrigation was employed, and supra-pubic and loin counter-openings made before the irrigation was started, so that free exit for the fluid was provided. In nearly all the cases the supra-pubic openings disclosed a pelvic collection of "peritoneal fluid and stomach contents." This shows how important it is in all cases of perforated gastric ulcer to examine the pelvis, if not by a separate opening, at any rate by inserting into it a sponge on a holder. If fluid is found, then I should certainly make a supra-pubic opening for cleansing and drainage, but I should not do so in every case, nor make counter-openings in the loins either. The right kidney pouch and the left loin can both be drained by long split tubes with gauze wicks from the anterior abdominal wound, but in some cases of very extensive infection of one or other loin no doubt a counter opening there would be advisable. In every case, even though the extravasation or the peritonitis was quite localised around the perforation, I should certainly drain, and of all drains the split drainage tube with gauze wick seems to me the best.

Barker[2] has recorded twelve consecutive cases of perforated gastric ulcer treated by sponging, with five recoveries. If we compare the results with Crisp English and Turner's after irrigation, we must remember that so much depends not only on the period which elapsed between the perforation and the operation, but on the extent of extravasation of stomach contents, that we can hardly conclude that irrigation is the best method to employ in all cases.

In all my cases but one I have been able to close the perforation by suturing, though in some it was very difficult to get the stitches to hold in the indurated friable tissue around the perforation, and in several the suturing was supplemented by an omental

[1] *Loc. cit.* [2] *Tr. Clin. Soc. Lond.*, 1900, xxxiii 39.

graft. In Case 4 I could not suture, the induration around the perforation was so great, but omental grafting alone answered well.

It is a mistake to suppose that free gas is always present in perforated gastric ulcer. It was suggested some years ago that all that was necessary to settle the diagnosis of doubtful cases of perforated gastric ulcer was to make a very small incision and see if free gas was present. If this test had been relied on, many perforations would have been missed. You must examine every part of the stomach. If you find no perforation anteriorly, you must divide the gastro-colic omentum, and examine the posterior surface of the stomach, though perforations here are rare. All my ten cases were anterior perforations. You are often led to the perforation by increased redness and lymph deposit on the wall of the stomach, and by pressure on it gas and stomach contents may be forced out. It has been suggested that air may be pumped through the perforation through an œsophageal tube passed from the mouth, but pressure on the stomach ought to be sufficient to cause the exit of gas or fluid at the perforation.

Because free gas is often not present in the peritoneal cavity in these cases, there may be no alteration in the liver dulness. I should say there rarely is obliteration of it, even if free gas is present. In a distended abdomen it may be obliterated from distension of the intestines, but in a flat abdomen I have seen it absent and no free gas present, so that I do not regard the presence or absence of liver dulness as a very reliable guide in these cases. Barker[1] has come to much the same conclusion from a study of his twelve cases. He found liver dulness present with abundant free gas, and absent without any free gas.

I have never felt inclined to adopt the suggestion made of late years by some surgeons, to do gastro-jejunostomy as well as close the perforation. Patients with perforated gastric ulcer do not seem to me suitable cases for any more operative interference than is absolutely necessary to save life, even in cases of early operation, and they do very well with suture alone if peritonitis has not already set in. Nor, for the same reason, should I excise a per-

[1] *Loc. cit.*

forated gastric ulcer, though several surgeons have done this, but not with much success.[1]

Mayo Robson says[2] that if the patient's condition will permit of it, the question as to the performance of gastro-jejunostomy should be considered, because other ulcers may be present and will be cured, and if on the point of perforating, perforation will be prevented, the sutured ulcer will heal better, there will be less risk of hæmatemesis, saline purgatives can be given and will assist in the absorption of peritoneal fluids, and early mouth feeding can be resorted to. Paterson[3] recommends it for much the same reasons, and Moynihan[4] seems inclined to recommend it in early operations, to aid the healing of the sutured ulcer, and to cure others which he says are usually present. As he points out, if in closing the perforation we have to seriously narrow the pyloric part of the stomach, it may be absolutely necessary, but the other reasons seem to me hardly urgent enough to demand it, for even though the operation is done early and the patient may bear the earlier stage of the operation well, yet we must remember that there has been very severe pain, and the less manipulation of abdominal viscera the better.

It may be necessary to do gastro-jejunostomy later for the condition of the stomach resulting from the ulcer, or if the ulcer will not heal with prolonged medical treatment. In one of my cases (Case 4) I had to do the operation for " hour-glass " stomach, due to contraction of a chronic ulcer six months after the closure of the perforation. But because gastro-jejunostomy may ultimately be necessary, I should not do it at the time of closure of the perforation. Some surgeons would, however, regard the possibility of later trouble as an argument for the performance of gastro-jejunostomy at the time of closure of the perforation.

Case 1.—Mrs. M., 40., March, 1908. Children's and Women's Hospital. History of pain and vomiting after food for some months. Pain very severe below left costal margin, extending up chest into left arm. Came on three hours after dinner. Four hours later seen with Dr. Osmond Bodman. Not then in much

[1] Paterson, *loc. cit.*

[2] *Brit. M. J.*, 1906, ii. 1347.

[3] *Loc. cit.* [4] *Abdominal Operations*, 1906, p. 148.

pain, but could not breathe deeply. Pulse under 100. Abdomen tender and rigid almost all over, but especially just below left costal margin. Three and a half hours later tenderness and rigidity were much less, but still marked below the left costal margin. She seemed easy, and could breathe more deeply. Operation eight hours after perforation. Perforation in anterior wall, near œsophageal orifice, with free escape of gastric fluid but no free gas. Brown fluid in pelvis and lymph in both renal regions as well as in region of stomach. Perforation sutured. Infected parts thoroughly sponged. Supra-pubic drainage opening, and drainage tube into right loin and splenic region from original wound. No shock. She made a good recovery. Feeding by nutrients only for fourteen days, and then by liquid only for some time

Case 2.—Miss B., 25, January, 1907. General Hospital. At onset very severe epigastric pain, four hours after a light meal, and continued for hours until opium given. I saw her with Dr. Cook thirty-five hours after perforation. There was then very little pain, and there had been no vomiting save a little retching at onset of the pain. There was a history of gastric ulcer five years ago, and a little epigastric pain a few days before. Considerable general tympanitic distension was present, with tenderness and rigidity under the left costal margin. Pulse 140; temperature 102°. Operation thirty-seven and a half hours after perforation. Perforation on anterior surface, just below lesser curve, and three inches from pylorus. Sutured, and omental graft used. Lymph and serous fluid in upper abdomen, including right kidney pouch, none in lower. Sponged. No counter openings, but many drainage tubes with wicks. Moderate shock. Fed by nutrients only for some time, then liquids only. Twenty-four days after operation began to expectorate pus, and serous fluid found at left base. Both conditions cleared up. Discharged quite well two months after operation.

Case 3.—Rose G., 20, November, 1906. General Hospital. Epigastric pain after food fourteen days. Onset 6.30 a.m. before any food taken, and very severe pain in epigastrum. I saw her thirty-six hours after perforation (had taken milk in meantime), and then she was not in pain. Moderate general distension, with slight general tenderness, but marked tenderness and rigidity over upper left rectus. Condition essentially the same three hours later. Pulse 120. Operation thirty-nine hours after perforation Upper left rectus remained rigid even under anæsthetic. Localised peritonitis about stomach. Perforation in lesser curve near œsophagus. Sutured. Pulse 140, but not feeble at end. Fed by nutrients only for fourteen days. Discharged well about six weeks after operation.

Case 4.—Miss R., 45, April, 1905. Gastric pain and vomiting for one month, and same symptoms with hæmatemesis some years before. At onset very severe abdominal pain, so that she could not move, and felt "as if something had broken in her side." Dr. Michell Clarke saw her seven and a half hours after perforation, and I saw her with him shortly after. Pain was then severe in epigastrum and left loin anteriorly, and she could not breathe deeply enough to speak plainly (as in Case 1). Pulse 120, not feeble. No vomiting. Twelve hours after perforation she was quite free from pain (no morphine) and pulse was less rapid, but the upper abdomen, especially the upper part of the left rectus, was very rigid and very tender. Operation thirteen and a half hours after perforation. Perforation in lesser curve. There was very great induration around, so that it was not possible to suture. The perforation was closed by an omental graft. There was only localised extravasation of stomach contents. Sponging and free drainage. No serious shock.

Case 5.—K.M. (female), 19, March, 1905. General Hospital. Suffered from epigastric pain and nausea for some time. At onset very severe pain, "doubling her up," and vomiting. Pain and vomiting continued. Seen by me about forty-six hours after perforation. Pulse 140, feeble; temperature 100.6°. Tense general abdominal distension and tenderness, most in right lower abdomen, but no rigidity. The greatest tenderness and fulness being in the right lower abdomen, I opened the abdomen here forty-nine hours after perforation, thinking it might be appendix trouble. I found a diffuse purulent peritonitis. Perforation was near the pylorus, and covered by lymph. Lymph peeled off, and perforation sutured. Sponged and counter opening for drainage made above pubes. Multiple drains. By fourth day much better. Pulse 104. Vomiting ceased. Abdomen hardly at all distended, soft, and not tender. Mouth feeding (peptonised milk) started. A large left subphrenic abscess developed and was drained. Intractable diarrhæa and epileptiform convulsions set in, and she died nearly three months after operation. At *post-mortem*, perforation sutured at operation found as a scar, and another ulcer had perforated, but was closed by adhesions. An abscess was found in the liver, and a considerable quantity of serous fluid with flakes of lymph in the pelvis, and a little pus was shut up amongst adherent coils of intestine.

Case 6.—Mabel R., 14, November, 1904. Children's and Women's Hospital. Epigastric pain and vomiting for a week. Then severe sharp pains which persisted, but she walked from city up to hospital the next morning, after a light breakfast, when the pain got more intense, and she became collapsed. It is not easy in this case from the symptoms to fix the time of perforation, but from the condition within the abdomen I should say it took

place that morning, and that the other symptoms were due to peritonitis at the base of the ulcer. I saw her about two hours after the most intense pain came on. The abdomen was board-like all over, and tender below the left costal margin, and in left iliac fossa, and hardly at all distended. The severe pain had gone, and she only had pain on breathing deeply or moving. Operation four hours later. Then temperature 102°. Perforation on anterior surface near pylorus was found and sutured. Clear fluid in left iliac fossa and pelvis. Irrigated with counter opening for drainage above pubes. Lymph on stomach, but no general peritonitis. No shock. Discharged well a month after operation. No complications.

Case 7.—E.C. (female), 25, May, 1908. At onset severe abdominal pain. Seen with Dr. Eberle and Dr. Walker Dunbar thirty-six hours after perforation. Another severe attack of pain ten and a half hours before I saw her. Pain had been on right side of abdomen, and ruptured appendix abscess was diagnosed. Temperature had been 102° earlier in the day. Pulse too feeble to count, and she seemed too bad to have much chance of recovery, but her relations wished to give her any slight chance which operation might give, if she died under it. Abdomen was much distended, rigid, and generally tender. Operation thirty-nine hours after perforation. Perforation near pylorus on anterior surface, with general peritonitis. Flushed. Died at end of operation.

Case 8.—Male, 18, May, 1903. General Hospital. Onset with severe pain in left abdomen. Supposed to be suffering from pleurisy before admission. Friction heard probably peritoneal. Admitted three days after perforation, and when seen by me a few hours after admission pulse was very feeble (130) and extremities chilly, though a warm evening. Abdomen distended with shifting dulness, but no tenderness or rigidity. Immediate operation. Perforation on anterior surface near pylorus. Sutured. General peritonitis. Flushed. Died soon after.

Case 9.—Mr. V., 45, July, 1903. General Hospital. Had been medical out-patient for gastric symptoms before onset of severe general abdominal pain and vomiting, when lifting a heavy weight. Seen an hour after. Then in great pain all over abdomen, and abdomen very rigid and tender all over. Loud friction heard over lower part of left chest below nipple. Operation five hours after perforation. Perforation on anterior surface close to pylorus. Sutured. Fluid widely extravasated. Flushed. No shock. Fed by nutrients only for ten days, and then only liquids for a time. Discharged well about two months after operation. Some bronchitis the only complication.

Case 10.—E.M.W. (female), 26, October, 1901. General Hospital. For three months subject to epigastric pain. At onset severe pain below left costal margin, ten and a half hours before I saw her, when laughing, and two hours after taking a teacup of arrowroot. Had had two previous severe attacks of pain, two days and four days earlier. When I saw her she was not in any pain, but had taken a pill to relieve the pain (prescribed by her doctor) four hours earlier. Abdomen was rigid all over, and very tender below left costal margin. Operation eleven hours after perforation. Perforation near œsophageal orifice on anterior surface, and very difficult to reach. Only localised extravasation. Sponging.

SURGICAL AID IN CHRONIC ULCER OF THE STOMACH.

BY

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A CONSTANT succession of dyspeptics, some alcoholic, some phthisical, all full of strange complainings in terms borrowed for the most part from soul-stirring newspaper advertisements, passing rapidly through an out-patient clinic is calculated to blunt one's interest, and to lull one into the passive belief that none are ever cured, and that the majority of them may be relieved by copious irrigation of the stomach with concoctions of rhubarb and gentian. Invaluable as this remedy proves in a great number of cases, it cannot be regarded as a panacea for every variety of digestive disturbance, and of late years its pre-eminence has been challenged by the surgeon. The operative treatment of chronic gastric ulcer has been attended by such noteworthy results, that the physician is tempted sometimes not to discriminate too closely, but to submit any and every case of indigestion to operation, with the inevitable penalty of disappointment.

Whether gastro-enterostomy in one of its forms is the best operation that can be devised, or whether some better procedure will presently be introduced, is not the object of discussion in this paper. So far as it goes it is a good operation, it relieves the patient under certain conditions; and the duty of the physician (in the intervals of suggesting fresh plans for operation to the surgeon) is to endeavour by every means in his power to select those cases that are likely to benefit from surgical interference, and learn to know those in which no good results are likely to follow.

The cases under my care which have been operated upon, in the belief that a chronic ulcer of the stomach or duodenum was present, are shown in the following list.

Ten cases suspected of chronic ulcer do not form a large series from which to arrive at general conclusions, but they provide illustrations of the difficulties encountered in diagnosing and prognosticating the conditions which surgery will relieve.

Case 1.—T.C.G., a man, aged 53. Eleven years previously suffered from vomiting (daily for three weeks), with a single large hæmatemesis. Six years ago treated for gastric ulcer, and again one year ago when he vomited frequently, sometimes "coffee grounds." No pain or tenderness, no gastrectasis, some indefinite resistance in epigastrium. Argyll-Robertson pupils, knee-jerks present, no inco-ordination, analgesia in arms and legs. Free HCl absent, and lactic acid (0.129 per cent.) present in gastric juice.

Here there seemed so much room for doubt, that in spite of recognising the fact that the man was probably suffering from spinal sclerosis, operation was advised. It was possible that there was some old ulcer or carcinoma of the stomach, and the general condition of the patient was fair. An exploration was made, no ulcer or growth was found, gastro-enterostomy was performed. Three months later he was well except for slight fulness after meals. Subsequently the vomiting recurred temporarily. The conclusion is that these attacks are gastric crises, yet there was good reason for believing it might be otherwise, and the patient suffered no ill-effects from his operation.

Case 2.—A.H., a man, aged 32. Four years ago was warded

for a month on account of vomiting blood and diarrhœa, one year ago a similar attack lasting six weeks. A fortnight before admission he had vomiting with blood. Vomiting always occurred soon after food. Painful spot in the nipple line just below left hypochondrium. Extreme emaciation. No signs of other disease.

At the operation no ulcer, growth or adhesions were found, but gastro-enterostomy was performed. Immediately the man improved and put on flesh (this had not been the case under medical treatment), but he has relapsed several times. Once he developed an ulcer of the larynx, and several times since he has had numerous small superficial ulcers in the mouth, suspected variously of being syphilitic or tuberculous. On the last occasion he came under observation it was evident that these ulcers started as blebs. Perhaps pemphigus is their true origin. Still, the improvement after operation was remarkable, and the patient has never seen reason to regret its performance.

Case 3.—M.C., a girl, aged 14, who had persistent vomiting after food with so much epigastric tenderness and pain of paroxysmal character that, although she had a few pleural crepitations at her right base, it was decided to perform an exploratory laparotomy. She urged us to operate, the pain was so severe, and she was so sure of its localisation.

Mr. Carwardine explored, and found an abnormal attachment (? congenital) of the omentum to the anterior abdominal wall; this he divided, but did not open the stomach. There was no external sign of ulcer. Eventually she developed extensive diffuse phthisis, and her pain was in no way relieved. Doubtless this pain was connected with a diaphragmatic pleurisy.

Case 4.—F.C., a girl, aged 19, with a history of six years' indigestion, constant pain relieved by lying down; vomiting at no definite time after meals; three years ago a single hæmatemesis; slight epigastric tenderness, no gastrectasis. She described her pain as so severe, so localised, and as making her life such a burden, that she begged for an operation "to see if there was not something there." Medical treatment had always failed to do any good.

Mr. Munro Smith operated, and found a stomach firmly adherent on its posterior aspect to a mass feeling the size of a cricket ball, which presented no prospect of safe removal. Gastro-

enterostomy was performed. There was complete relief from pain, no recurrence ; the girl put on flesh ; two and a half years afterwards could eat " just anything," and was happily married.

Case 5.—L.D., a girl, aged 18, with the appearance of a fairly healthy child of 12 (Lorain's infantilism). Epigastric pain, worse after food, for two years. Hæmatemesis (0j) nine months ago, and one month later. Great cutaneous hyperæsthesia in epigastrium. Enormous gastrectasis, greater curvature just over pubes. Had menstruated once at 13, absent since.

Gastro-enterostomy performed by Mr. Carwardine. Inflammatory tumour found, completely obstructing pylorus. The relief was immediate, the child grew into a woman in a few weeks. The stomach remained distensible for many months, and at rare intervals there was vomiting. The weight increased in eight months from 6 st. to 10 st. 3 lb. After six months the stomach could no longer be abnormally distended with seidlitz powder. Eighteen months after operation was in excellent health and appeared a healthy young woman of 20 ; catamenia regular.

Case 6.—A.H., single woman, aged 34. Indigestion on and off since childhood. Hæmatemesis three years ago. Pain directly after food, temporarily relieved by medical treatment. No vomiting, no tenderness, no gastrectasis.

Laparotomy by Mr. Carwardine. Hour-glass stomach, also scarred duodenal ulcer obstructing pylorus. Gastro-jejunostomy and gastro-gastrostomy performed. The relief from operation was considerable, but at times indigestion returns (eighteen months after operation). The patient is very glad she was operated on.

Case 7.—M.V., married woman, aged 37. Fourteen years ago vomiting after food with streaks of blood ; indigestion on and off ever since. Pain directly after food in epigastrium and back. Water-brash, gastrectasis, lump felt in epigastrium. Gastric juice, free HCl, no lactic or butyric acid.

Gastro-enterostomy by Mr. Carwardine. Duodenal adhesions and considerable dilatation of stomach found (? duodenal ulcer). Marked relief of indigestion and water-brash, continuing for two years.

Case 8.—C.G., single woman, aged 37. Frequently under treatment for dyspepsia during past sixteen years. Pain about one hour after meals, relieved by vomiting. Hæmatemesis eight years and six years ago. In latter years vomiting less frequent, but the desire to vomit has increased. Superficial cutaneous hyperæsthesia and some deep tenderness in epigastrium. No gastrectasis.

Gastro-enterostomy performed by Dr. J. Swain. Pylorus not apparently thickened, no ulcer found, but very great relief from the operation. The patient is a maid at the Bristol Royal Infirmary, and is under constant observation. Her satisfaction ten months after operation is undiminished.

Case 9.—K.S., married woman, aged 46. For twelve months had complained of pain just below left hypochondrium one hour after food. Sickness after every meal, which used to relieve the pain, but later ceased to do so. Always free from pain when constipated or when lying down. Never hæmatemesis. Slight tenderness in epigastrium, no gastrectasis.

Operation by Mr. Bush. Marked puckering along lesser curvature of stomach, an indurated mass involving equally anterior and posterior surfaces, and reducing the length of lesser curvature to one half of normal. Gastro-enterostomy performed with complete and lasting relief (one year later).

Case 10.—J.M., man, aged 55. For five years pain after food, vomiting (a pailful at a time) for twelve months. Progressive wasting, lemon tint of skin noticed by friends. Gastrectasis, visible peristalsis, lesser curvature just below umbilicus. A firm "knob" felt at right edge of right rectus when peristalsis reached this point. Liver dulness displaced downwards but not enlarged. Gastric juice: Free HCl absent.

Operation by Mr. Hey Groves. Pylorus thick and nodular, anterior surface marked by scar to which omentum adhered: complete pyloric stenosis. Gastro-enterostomy performed and piece of tumour removed for examination. *Pathol. report.*—At first only inflammatory tissue found, but later in posterior pyloric wall undoubted area of columnar-celled carcinoma. Twelve days after first operation Mr. Groves performed pylorectomy. The patient made a good recovery and experienced great relief from the operation (after six months').

ANALYSIS OF CASES.

Case.	History.	Pain.	Vomiting.	Hæmatemesis.	Dilatation.	Condition found.	Result.
1.—T.C.G.	11 years	No	Yes. Frequent	Yes. Twice 11 and 6 years ago	No	No ulcer found	Temporary Relief.
2.—A.H.	4 years	Constant	Yes. After food	Yes. Twice	No	No ulcer found	Partial relief.
3.—M.C.	6 months	Paroxysms	Yes	No	No	Phthisis	No relief.
4.—F.C.	6 years	Constant	Yes. Without relation to food	Yes. Once	No	Old gastric ulcer with adhesions	Relief.
5.—L.D.	2 years	After food	Rarely	Yes. Twice	Yes	Old pyloric ulcer with complete stenosis	Relief.
6.—Annie H	From childhood	After food	No	Yes. Once	No	Two ulcers. Gastric and duodenal	Relief.
7.—M.V.	14 years	After food	Yes	No	Yes	Old duodenal ulcer with adhesions	Relief.
8.—C.G.	16 years	One hour after food	Yes	Yes. Twice	No	No ulcer or adhesions	Great relief.
9.—K.S.	1 to 2 years	One hour after food	Yes. After food	No	No	Old ulcer on lesser curvature with much puckering	Relief.
10.—J.M.	5 years	After food	Yes. A pailful at a time	No	Yes	Old pyloric ulcer ? carcinoma	Relief.

Analysis of seven cases improved by operation :—

Pain present in	7 cases.
Vomiting present in	6 cases.
Hæmatemesis present in ..	4 cases.
Stenosis present in	3 cases.

In discussing these cases one is tempted to look for some leading symptom or combination of symptoms, or to hope for some mechanical (chemical or otherwise) method of arriving at a diagnosis of chronic ulcer of the stomach. But excepting pain and vomiting there seems no other reliable sign, and these two are shared by many other diseases.

Gastric contents.—Little or no help is derived from the test-meal, and the presence or absence of this or that constituent. A considerable experience of " test-meals," carried out in various hospitals upon the subjects of many diseases, carries with it the conviction that " test-meals " offer absolutely no reliable division of gastric cases into those which will and those which will not benefit by operation. Hyperchlorhydria, hypochlorhydria, achylia gastrica, deficient or increased motility, will none of them give the unfailing indication.

Gastrectasis is by no means necessarily present in the cases which profit most by gastro-enterostomy.

Tumour.—The presence of a palpable tumour means very little in the diagnosis between inflammatory tissue and neoplasm ; its absence has no bearing on the question of a profitable or unprofitable operation.

Hæmatemesis or Melæna.—Both these signs are most misleading. Hæmatemesis in small quantities as described by the patient is most difficult to distinguish from hæmoptysis. Malignant disease, especially in the early stage, occasionally causes a single large hæmatemesis. Duodenal ulcer is not uncommonly associated with hæmatemesis and melæna from regurgitation of blood through the pylorus. The erosion of the liver by an adherent simple ulcer will give rise to constant " coffee-ground " vomiting.

Hæmatemesis from a general oozing of the gastric mucosa (gastrostaxis) is not unknown, may be very severe, and profits but little by gastro-enterostomy.

Cutaneous hyperæsthesia, especially galvano-hyperæsthesia, may be of great help in diagnosis. The absence of this sign need deter no one from operation if other indications are present.

The chief guide to operation is the patient as a whole; A long history of indigestion, with vomiting and occasional attacks of hæmatemesis dating from early adult life (I begin to think that gastric ulcer is not so very rare in children of 12 or 14) will form the foundation of most accounts of chronic ulcer. While to these may be added epigastric pain—pain before food, directly after food, an hour or two after food and pain all the time; the sufferers from ulcer of the stomach or duodenum know all these variations. A resistance, thickening or definite lump in the epigastrium only forms an additional reason for operating; and gastrectasis with visible peristalsis as ascertained by inflation with CO_2 clinches the matter.

Operation is indicated in:—

(*a*) Painful ulcer.
(*b*) Recurrent haemorrhage.
(*c*) Pyloric stenosis.

In these three conditions there will probably be no difference of opinion as to their suitability; but there is one more class, consisting of chronic dyspeptics, who, having honestly tried medical treatment, find themselves unrelieved. With the proviso that operation is not undertaken for the following conditions, they should be operated on:—

(1) Chronic alcoholism or drug-taking.
(2) Gastric crises.
(3) Phthisis.
    (*a*) Dyspepsia.
    (*b*) Hæmoptysis.
    (*c*) Diaphragmatic pleurisy.
(4) Mitral stenosis.
    (*a*) Pain.
    (*b*) Hæmoptysis.

(5) Cirrhosis of liver.
(6) Chronic Bright's disease (dyspepsia).
(7) Renal colic.
(8) Addison's disease (nausea, vomiting and faintness).
(9) Overloaded or distended colon.
(10) Arsenic poisoning.

Atonic dilatation.—Clifford Allbutt says that "the frequency of dilatation of the stomach as a complication or sequel of acute disease is not sufficiently appreciated" in the estimate of the causes of dilatation of the stomach not depending on pyloric stenosis, and he quotes (not in agreement) "a London physician of almost singular eminence," who said to him "that of dilatation of the stomach apart from pyloric obstruction he knew nothing." Yet except during convalescence from an acute disease, I believe the diagnosis of "atonic dilatation" should be received with the utmost scepticism. It has been quite astonishing to find how frequently the *post-mortem* or (in modern times) the operating table has shown an obstructive cause for the so-called atony. Unless such a case yields very quickly to diet and treatment it should be explored.

For general neurotic symptoms coexisting with a dilated stomach no great respect is demanded. Constant dyspepsia is as liable to cause as to be caused by "a general neurotic disposition."

Our army of neurasthenics is an ever-diminishing one, and as a disinterested observer of a very large number of surgical operations, I shall never make the diagnosis of "gastric neurosis" with complete assurance, nor hear it made without a lurking suspicion that some day surgery will "inconveniently confront us" with something more tangible than our own maxims, and a very solid basis for the hypochondriacal disorder.

In a very great measure the patient is his or her own, and our best guide, if, being of sound mind and appreciating fully the risks, such an one comes deliberately to the conclusion that the pain, vomiting, discomfort and emaciation make life no longer worth living. Then, in the absence of other contra-indications, we are amply justified in advising, if not gastro-enterostomy, at least an exploratory laparotomy.

One last word on the after-treatment. After a gastro-enterostomy has been performed by any of the present methods, there are constantly being reported disappointments of one sort or another, and various mechanical explanations have been given, vicious circles talked of, and numerous twists and kinks given to the gut in order to circumvent the difficulties. In point of fact, is the after-treatment always sufficiently cautiously proceeded with? My experience with the operation may be exceptional, but I have not encountered as yet one of these results, perhaps because the patients have usually continued for about two months after operation a course of dieting and treatment precisely as though they were recovering from acute ulcer with hæmatemesis.

THE AURAL COMPLICATIONS OF INFLUENZA AND THEIR TREATMENT.

BY

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Now that the influenza season is again approaching, it seems a not unfitting time to call attention, in a very brief way, to the various ear troubles it may give rise to, especially as these form a fairly frequent complication of this affection. Amongst adults it is one of the commonest causes of suppurative otitis, and probably accounts for more of this trouble in children than is generally supposed; and particularly is this the case in those suffering from adenoids. Common catarrhs, adenoids, measles and scarlet fever are, however, more frequent causes in children. Although there are some peculiarities in influenzal otitis to which attention must be called, there is, however, no very material difference in treatment between it and that due to other specific affections.

Influenza may set up acute otitis media by way of the Eustachian tube, which may be non-suppurative or suppurative, the latter being the more common.

With regard to the former, the symptoms are acute pain in the ear, with congestion of the drum, and probably blocked Eustachian tube and deafness. The treatment to be adopted will be that of antiseptic sprays or irrigations to the naso-pharynx, leeches to the front and back of the ear (if the symptoms are severe), instillation of a few drops of warmed carbolised glycerine into the meatus, and hot *dry* applications over the ear. A brisk aperient should also be administered. As the acute symptoms subside, the ear should be gently inflated by Politzerising or catheter—preferably the latter, as it is more accurate, and the force of the inflation can be better regulated.

The evidence of case histories shows that this acute non-suppurative otitis caused by influenza is not infrequently the precursor of chronic adhesive middle-ear catarrh. It is, therefore, of the utmost importance to treat it with the greatest care in the early stages, and not to let the patient pass from one's hands until cured.

Suppurative otitis media in influenza is often characterised by the extreme acuteness of the process. with ecchymosis, and the formation of hemorrhagic blebs on the drum and on the deeper parts of the meatus, and also by its great tendency to involve the mastoid process. Accompanying these appearances are intense pain of neuralgic character, and, of course, deafness, the latter often coming on more gradually than in other forms of otitis. Another peculiar feature is that this pain is not always immediately relieved when the drum has burst or has been incised, which is the case in other forms of suppurating ears. The early treatment of these cases should be the same as mentioned above in the non-suppurative variety. A careful watch must, however, be kept for signs of suppuration, and persisting intense pain or bulging drum should be treated by free incision of the membrane from top to bottom behind the handle of the malleus. This treatment is far better than allowing the drum to perforate, since it is followed by immediate drainage, and healing occurs

more quickly than in the case of spontaneous perforation. As mentioned above, however, the pain may persist for a few days after the incision. The treatment after incision will depend upon the fancy of the surgeon, and the conditions under which it must be carried out. When the surgeon is able to carry out this himself, thorough cleansing and drying of the ear, and packing down to the perforation with a strip of moist antiseptic gauze as often as is necessary, is perhaps the best. This, however, is seldom possible, and when, as more often happens, the patient's friends have to carry out the treatment, I am in the habit of ordering irrigations (not syringing) of warm boric lotion, carried out frequently, a large quantity of lotion being used each time. The frequency with which this should be carried out will depend upon the amount of discharge. If the incision is free or the perforation large, it is often unnecessary to order any other treatment than this, as the discharge rapidly diminishes, and the perforation heals in a week or two or less. When, however, all the acute symptoms have passed, and the discharge is much diminished but the perforation is sluggish in healing, a little boric powder may be insufflated, or some glycerine of carbolic acid, 1 in 10, instilled after the ear has been cleansed and dried. When the perforation is spontaneous and small, and especially if it is at the apex of a nipple-like projection of the drum, it should be enlarged by incision ; but if this is not indicated, and the perforation is still small, the best plan is to instil peroxide of hydrogen (hydrozone and perhydrol are strong solutions of the same) for fifteen minutes ; mop dry or syringe, and then instil for a similar period a few drops of glycerine of carbolic acid, 1 in 10, or of glycerine of borax with two drams of absolute alcohol to the ounce. Irrigation and syringing are not of much value when the perforation is small ; they only cleanse the meatus. After the perforation has firmly healed it will probably be found necessary to carry out a course of inflations through the Eustachian tube for a time, to completely restore the hearing. If there are not, after three weeks of the above treatment, clear indications that the affection is coming to an end and the perforation closing, it must be assumed either that the antrum

is not draining properly through the tympanum, or that the mastoid process is involved. Under these circumstances the antrum must be opened and drained for a time, and the tympanic cavity washed out by this route.

As before mentioned, one of the peculiarities of influenzal otitis is its tendency to involve the mastoid process. This involvement may take place before there is any perforation of the drum, or indeed, although rarely, without there being any discharge from the meatus. It may involve the mastoid cells without there being any obvious communication with the tympanum, and it may cause rapid destruction of the bone, early exposing the lateral sinus or dura mater, and giving rise to any of the ordinary intracranial complications. The diagnosis of influenzal mastoiditis is not always easy, and it must be remembered that pain and tenderness over the mastoid at the *commencement* of the ear trouble will often subside under active antiphlogistic treatment if there is a free opening in the drum. Temperature is very little guide, as it is often subnormal, with the mastoid full of pus and carious bone. A persisting tenderness after the first few days with no abatement in the discharge, with or without swelling, and œdema over the mastoid process, indicates operation without delay. In most cases it will be found necessary to remove the whole of the outer cortex of the mastoid from apex to antrum. Should a specially tender spot be noticed, this may be explored first, for the abscess may then be localised. I have seen cases in which the mastoid cells were filled with pus and carious and necrotic bone, and the antrum unaffected, and apparently unconnected with them. After removal of the cortex, all diseased bone should be thoroughly scraped away, and the cavity packed with gauze. It will, of course, be understood that in the acute cases I have been discussing the ossicles are not interfered with nor the drum, unless it is necessary to enlarge an opening in the latter. In this short sketch the intracranial complications cannot be discussed.

Finally, there are those cases of post-influenzal deafness which on examination are found to be of nervous origin. They

are probably due to a neuritis of the auditory nerve, though some are supposed to be caused by changes in the labyrinth. There is not infrequently severe tinnitus with them. In this case the treatment consists in the administration of strychnine, either hypodermically or by the mouth. The treatment must be persisted in for some weeks, and the quantity increased gradually until a full dose is reached.

ON THE RENAL CHANGES IN A CASE OF HEMORRHAGE INTO THE PONS WITH CONSEQUENT HIGH BLOOD PRESSURE.

BY

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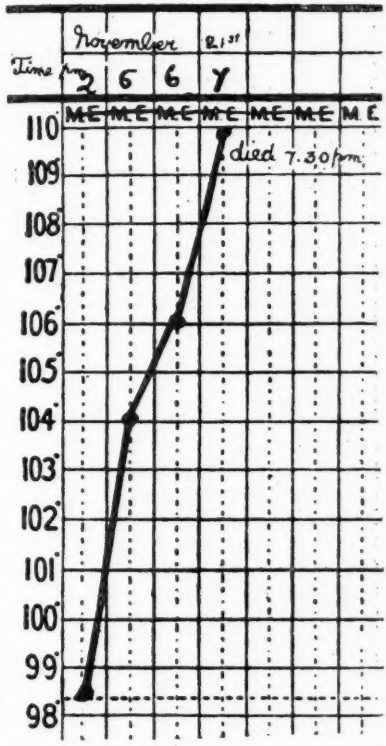
THE following case is interesting in relation to the changes which were found in the kidneys, presumably as the result of a sudden and great rise of blood pressure.

The patient, W.W., æt. 33, a dock labourer, was stated to have always been a healthy man, and never to have had any bad illness. He was at his work on the morning of November 20th, 1907, and felt some headache for half an hour. About 11 o'clock he suddenly fell down unconscious, and was brought to the Bristol General Hospital. The patient on admission was a strong, muscular man; he was profoundly unconscious and could not be roused. His face was pale, and the respiration shallow, slow and stertorous. Temperature 98.8°, the same on both sides of the body. Pulse 164, of high tension and incompressible. Pulses equal. Blood pressure on admission: systolic 250 mm. Hg., diastolic 200; taken later the systolic pressure was from 250 to 260 mm. Hg. Chest, well-developed, symmetrical; lungs, normal.

Heart, apex beat in 5th space, in nipple line or just outside it, with pulsation in epigastrium. Cardiac dulness; 3rd costal cartilage above, from right border of sternum to apex beat. No murmur. Aortic 2nd sound loud and accentuated.

Abdomen. The bladder was much distended, reaching above the umbilicus. Two quarts of urine were withdrawn by catheter.

Nervous System. The patient lay on his back—all four limbs were absolutely flaccid and motionless; when held up they dropped back on the bed. Both eyes were directed downwards and a little to the right; the pupils were small, but not pin-point, and did not react to light. The left naso-labial furrow was a little deeper than the right; there was slight spasm of the muscles of the right side of the neck. The abdominal, cremasteric and plantar reflexes were absent. The knee-jerks were active, the right greater than the left; the elbow and ankle-jerks were present. The breathing became gradually slower and more laboured, and the temperature steadily rose until it reached 110° at his death at 7.30 p.m. on the same evening. There were no convulsions at any time. The paralysis remained flaccid throughout. The urine withdrawn by catheter was neutral in reaction; sp. gravity 1010; it contained a large amount of proteid. This was found to consist almost entirely of albumose, with a small quantity of albumin. The urine was boiled with the addition of dilute acetic acid, and the coagulated albumin filtered off. The filtrate gave no further precipitate on boiling, but on half saturation with salicyl-sulphonic acid a dense precipitate formed, which cleared up on heating and reappeared on cooling. A similar precipitate was obtained with strong HNO_3 in the cold, and the biuret reaction was also present. The reaction for Bence-Jones albumin was not obtained. There was no sugar.



The *post-mortem* was made seventeen hours after death.

Body of a well-nourished, muscular man. The lungs were healthy, but showed intense congestion; they were only slightly crepitant, but showed no actual consolidation. *Heart* weighed sixteen ounces. Both auriclea and the right ventricle were over-distended with blood; both ventricles were thick-walled; the muscle appeared healthy. At the base of the aorta, just above the valves, there was a small patch of commencing atheroma, probably due to syphilitic aortitis; the aortic valves were opaque and slightly thickened, but held water. The coronary arteries were normal and pervious. *Abdomen:* Liver and stomach and intestines normal. Spleen weighed six ounces; soft and dark. *Kidneys* showed intense congestion; this was most marked in the cortex, but was also very pronounced in the medulla. In one kidney there was the scar of an old, small infarct. The capsules stripped readily, leaving a smooth surface. The consistence of the kidneys was normal, the cortex was somewhat swollen in relation to the medulla; there was no evidence of interstitial change. The bladder was distended with urine. *Brain:* On removal of the calvarium and opening the dura, a large amount of dark, recent blood clot, which had been effused over the right hemisphere, escaped from the subdural space. On section the upper part of the pons was the seat of a large hemorrhage, which occupied the whole of the cross section of the pons, which it had completely destroyed except for a small shell of brain tissue surrounding the effused blood. No other lesion was found in the brain, which was entirely healthy except for the pontine hemorrhage.

Portions of the kidney were embedded in paraffin, cut and stained with hæmalum and eosin, by Van Gieson's stain, and with hæmatoxylin and rubin and rosin. Other portions were boiled at once, in order to fix, if possible, the proteid excreted in the urine. First, with the exception of the small, old infarct referred to above, the kidneys were the seat of acute changes, and showed no evidence of previous disease or of antecedent interstitial changes; secondly, there was very general cloudy swelling of the tubular epithelium, due doubtless to the high temperature before death. The other changes found may be fairly attributed to the sudden and very high rise of blood pressure.

The boiled portions made good sections, and showed that numbers of the glomeruli contained a coagulable exudation in varying amount between the visceral and parietal layers of the capsular membrane; in some cases the amount was so great as to effectively compress the glomerulus. (See Fig. 1.)

In addition, there were numerous microscopic hemorrhages into the glomeruli. These hemorrhages were mostly in the glomerulus itself, between the capillaries, often forming a thin layer spread over it, under or within the visceral layer of the capsule. In a very few the blood had escaped into the peri-

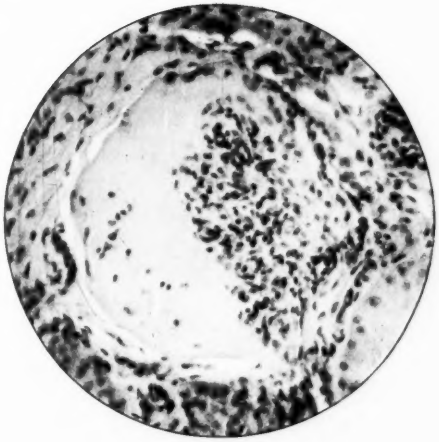


Fig. 1.

Photograph of Glomerulus (boiled kidney), showing coagulated exudation between visceral and parietal layers of capsule. The glomerulus is shrunken; in its upper part is a microscopic hemorrhage. A few leucocytes are seen in the exudation.

glomerular space, and in some instances a thin layer of blood lay under the visceral capsular layer, and coagulated exudation filled the glomerular space.

In the convoluted tubules there was so much swelling of the epithelium (boiled specimen) that no coagulated exudation could be distinctly made out in them; but many of the descending loops of Henle contained such an exudation.

The other sections (from non-boiled portions of kidney) showed most intense congestion of the organ throughout. The cortex from this cause appeared swollen, the vessels under the capsule intensely injected, also the capillaries of the glomeruli, from which minute hemorrhages had occurred as above stated; and there were also some minute hemorrhages into the interstitial tissue between the convoluted tubules. The general appearance of the cortex, in addition to these changes, appeared considerably altered, not altogether from the destruction of the individual cells of the tubules—which was a part of the process—as from a general disturbance or breaking-up of the normal arrangements of the various constituents of the kidney structure. (See Fig. 2.) In the medulla the straight tubules in many parts appeared crushed together by the injection of the vessels lying between them.

To sum up, in this case a man—with some slight thickening of the aortic valves not producing any symptoms and apparently in sound health, doing heavy work, and whose organs, examined after death, showed otherwise no signs of antecedent disease—is suddenly taken with a very large hemorrhage into the upper part of the Pons Varolii, dying a few hours afterwards.

The blood pressure about one and a half hours after the onset had already risen very high, and remained so until death. The temperature rose gradually, reaching 104° about five and a half hours after the onset and 110° at death. The sudden rise of blood pressure presumably caused the intense congestion of the kidneys, with the small hemorrhages into the glomeruli, mostly confined by the visceral layer of the glomerular capsules, which were found *post-mortem*; there was no hæmaturia. As the immediate effect, there was at once a very large excretion of urine containing albumose. From the appearances in sections of the boiled kidney the albumose was excreted through the glomeruli, and presumably as the effect of the rapid rise of blood pressure. That it was not due to damage of the cells of the glomeruli by hyperpyrexia is shown by the fact that two quarts

of urine, containing albumose and albumin, were found in the bladder on admission to hospital, when the temperature was 99° only. It is interesting to compare this excretion of proteid in the form of albumose with the known fact that in the early stage of some cases of contracted granular kidney in which there is a sustained high blood pressure, albumose in small quantity is, for a long time, the form in which proteid is found in the urine. In addition, the high blood pressure seems to have produced a certain amount of disorganisation of the kidney structure.

In conclusion, it is my pleasing duty to thank Dr. E. V. Dunkley, Pathologist to the Hospital, for preparing excellent sections of the kidney.

A CASE OF SEVERE TRIGEMINAL NEURALGIA SUCCESSFULLY TREATED BY EXCISION OF THE GASSERIAN GANGLION.

BY

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FORTUNATELY, trigeminal neuralgia of severe degree is a rare disease, and its radical treatment has been one of the recent notable advances of surgery. It may be of interest, therefore, to describe the symptoms and operative details in a case of exceptional severity.

L.R., a married woman of 40, was sent to me by Dr. Thomas, of Newport, in February, 1907, after she had been attending as an out-patient at the hospital there for five weeks. She had had salicylates, aspirin, gelsemium, and other drugs by mouth, together with various local applications, but none of these had the slightest permanent effect upon the pain. Her history was that she had had seven children, but no miscarriages or any other illness. About five years previously she had a bad attack of neuralgia on the right side of her face, which lasted on and off for about six months. Thirteen teeth were extracted without much benefit, and this left her edentulous on the right side.

Ten months prior to my seeing her the present attack began, after she had been suckling a child for twelve months. During the last two months of this period the pain had become much more constant and the paroxysms more severe. She was a thin, short woman, of quiet and placid disposition, quite free from any obvious neurotic tendencies. The pain, which was strictly limited to the right side of the face, was of a constant and dull character, affecting the cheek, jaws and tongue. Every few minutes a violent paroxysm began in the chin and spread up to the forehead, and lasted from one-half to five minutes. During the time that she was being examined, it was rare for as much as five minutes to elapse without such a spasm occurring; but when she was left to herself she liked to draw the curtains round her bed to exclude any possible draught, but even then the attacks recurred every twenty minutes to half an hour during both day and night. She described the pain as being like fire or red-hot wires being driven into hollow teeth. The skin of the face was rough and cracked on the right side, and of a darker colour than that on the opposite. The hair was quite lost from the right temple and eyebrow as the result of the franctic rubbing to which she subjected herself during each paroxysm. No spots of anæsthesia were observed. Mr. Walker kindly examined her eyes, and found the discs healthy, but a high degree of hypermetropic astigmatism was present on both sides, amounting to 6.5 D in the vertical diameter and 9 D in the horizontal. Treatment by atropine had no effect upon the pain. The heart, lungs, and kidneys were healthy. After a consultation with Dr. Michell Clarke, it was decided that it was quite useless to try any further palliative measures, and the excision of the Gasserian ganglion was decided on. On February 27th, 1907, the operation was performed. Following Crile's suggestion with a view to lessening the hemorrhage, the right common carotid artery was exposed by the usual incision, and a temporary ligature placed upon it. The right eyelids were stitched together to avoid post-operative neuropathic keratitis. A ∩ shaped flap of skin and muscle was turned down in the right temporal region, the base of the flap being over the zygoma. A piece of bone was removed by a one-inch trephine, and the opening enlarged, especially downwards, by Hoffman's forceps. On separating the dura the bleeding was so great as to quite obscure all view of the cavity in the skull. A constant suction apparatus, arranged on the principle of a Cathcart's irrigator, was employed with excellent results to keep the blood out of the cavity. The nozzle of this had to be changed from time to time owing to the rapid clotting of blood. The trunk of the middle meningeal artery on the deep surface of the dura served as a guide to the foramen ovale, through which the third division of the fifth nerve leaves the skull. The artery was cut without any bleeding, and

this appeared to be the sole gain derived from the ligature of the carotid. At this stage the third division of the nerve was seen running downwards and the second forwards, and the ganglion at their junction; but owing to the way in which the dura mater splits to enclose the nerves and cavernous sinus their definition was anything but clear, especially as their situation is nearly two inches deep from the surface. Both divisions were cut; but whilst an attempt was being made to free the ganglion a sudden furious bleeding occurred, similar to that which follows the opening of the lateral sinus in mastoid operations, and this made it necessary to plug the wound and temporarily to abandon the operation. The ligature on the carotid was replaced by a permanent one, lest its removal should restart the bleeding. The operation was followed by prolonged unconsciousness lasting 7½ hours, and accompanied by slow breathing and a pulse of 40. During the succeeding days her condition gave rise to no anxiety, and she was free from pain, saying that the side of her face and tongue felt dead. On March 4th, 1907, the operation was completed, and this stage proved so easy that I should be inclined on future occasions, instead of clamping the carotid, to deliberately operate *a deux temps*. The root of the nerve was isolated and cut, and the ganglion twisted out by pressure forceps. A piece of iodoform gauze was left in the depths of the wound and brought out between the posterior edges of the skin incision, which otherwise was sewn together. On this occasion there was practically no shock, and the patient made a rapid and uneventful recovery. When I showed the patient before the Bristol Medico-Chirurgical Society last March her condition was as follows: The hair had grown well over the scar, and also over the temple and eyebrow, and she was perfectly free from any pain or discomfort. Over the right cheek and lips there was an area of anæsthesia to light touch (epicritic sensation), which ended in an abrupt right angle at the tragus of the ear. There was no alteration of sensation in the eyelids or forehead; and corneal sensation was dulled but not absent; evidently the ophthalmic division of the nerve had partly escaped removal. Within the anæsthetic area she could still feel deep pressure or the prick of a pin (protopathic sensation). The external auditory meatus and tympanic membrane were normally sensitive. The inner surface of the cheek, the gums and tongue in its right half, were both anæsthetic and analgesic, and she was quite unaware of a needle being thrust through the latter. The area of anæsthesia ended behind the anterior faucial pillar. It is probable, from the analogy of other cases, that these areas of anæsthesia are quite permanent.

In view of the extreme misery to which patients are reduced who suffer from trigeminal neuralgia, which is often so great

as to induce them to resort either to suicide or to the worst form of morphia habit, no operation which produces a radical cure can be regarded as too severe; and considering that more than ten years have now elapsed since excision of the Gasserian ganglion was performed, and that none of the patients have had any return of the symptoms when the operation has been complete, it may be fairly claimed that this procedure is a radical cure.

All such measures as neurectomy of the branches of the nerve, the injection of osmic acid or absolute alcohol into the nerve foramina, are merely of temporary effect, which seldom lasts longer than a few months.

As regards the method of the removal of the ganglion, the consensus of opinion is favourable to the temporal route, the alternative being the zygomatic route, in which the zygoma is turned down, the coronoid process of the jaw is turned up, and the skull is opened from below by chiselling round the foramina through which the nerves leave the skull. This latter method is more difficult, and the ganglion can only be extracted piecemeal with great uncertainty.

It has also been suggested that the root of the ganglion can be cut in the posterior fossa of the skull, but the technical difficulties of this operation are greater than those of the more radical operation upon the ganglion.

In conclusion, I might add that the excised ganglion was examined by Dr. Michell Clarke (to whom I am greatly indebted for his kindness and help over this case), who cut sections of it, and stained them by various methods. These sections, which were exhibited at the same time as the patient, showed no recognisable pathological change, and this is in accordance with the findings of other observers. Nothing is more remarkable in this disease than the absolute obscurity of its origin as compared with the definite character of its symptoms and treatment.

SOME COMPLICATIONS OF RUPTURED LIVER.

BY

LIONEL SHINGLETON SMITH, M.B. Cantab.

THE liver is liable to very serious injury, which may result in the death of the patient in a few minutes from internal hemorrhage; or if the bleeding is checked, either by the resistance of the liver capsule and ligaments or by surgical means, the patient may survive; or a sub-capsular hæmatoma or sub-phrenic hæmatoma may form, and on the addition of pyogenic organisms, brought thither by the portal blood, an abscess in the liver substance or under the diaphragm is formed, which, if left unopened, must terminate fatally.

Generally, a severely ruptured liver is accompanied by some other lesion, of which the following are commonly found *post-mortem*:—Fractured ribs, lacerated lung, ruptured spleen, ruptured kidney, and ruptured diaphragm, numerous recorded instances of which can be seen in the surgical and *post-mortem* books of the Bristol Royal Infirmary.

With these conditions I am not going to deal, but to touch lightly on those cases which are less severe, and at the time may be even overlooked, but which are liable to terminate fatally as the result.

On September 13th, 1907, a woman, æt. 50, was admitted to the South Devon and East Cornwall Hospital under the care of Mr. Woollcombe, suffering from what appeared to be a typical empyema.

History.—The patient had been in good health for the past fifteen years till ten days ago, when she was taken with vomiting and shivering fits. Her friends put this illness down to a blow with a broom-handle which her husband had dealt her some six months before.

On admission the patient was feverish, with temperature 102.8°, and had a severe pain in the right side over the lower ribs. A fulness with obliteration of the intercostal spaces was observed, diminished vocal vibration, marked dulness on percussion,

and diminished voice and breath sounds were elicited over the lower part of the right chest, behind and in the midaxillary line, but in front the chest was resonant. The exploring needle was inserted in several places behind, but no fluid was detected. *September 24th:* A Turner's trochar was inserted in the ninth interspace, and much thick fluid of a chocolate colour drained away; this continued to drain freely for some days. *October 9th:* The wound was enlarged, and a piece of rib removed, after which more of this pus came away, and thick masses of slough were scraped away with a spoon, and two rubber tubes inserted. *October 10th:* The tubes drained well, and were irrigated through twice daily, but the temperature kept up to 100 and 101° F., when a large, tender inflammatory swelling became apparent in the right groin. This was opened under local anæsthesia, and a tablespoonful of thick white pus let out; the abscess cavity was limited all round, except above, where it seemed to extend well above Poupart's ligament. The patient became gradually worse, the abscess in the groin closed up, and she died on November 25th.

Autopsy.—The sinus in the chest was seen to lead down below and behind the liver to the upper surface of that organ. Lungs, normal. The liver was found to contain a large abscess as big as one's fist, occupying the upper and posterior portion of the liver, and separated from the diaphragm by a very thin layer of liver substance. The sinus was traced down to the liver, but there was found no communication between it and the liver abscess. A large psoas abscess was also present, pointing in the right groin; this was traced close up to the hepatic abscess, but no opening could be found leading from one to the other. The appendix was normal, and there was not, nor had been, any inflammation in that region. The pus was white, and the only organisms found were staphylococci. There were no hooklets present to point to hydatid disease.

This patient had never been abroad, and therefore a tropical abscess may be excluded. There were no hooklets to indicate hydatid disease; no intestinal foci of suppuration which might cause secondary hepatic abscesses, and therefore a suppurating hæmatoma was evidently the cause of the illness and death, though the injury at the time was ignored.

Abdominal injuries, resulting in a ruptured liver of greater extent than in the case above mentioned, and which give rise to hemorrhage sufficient to be diagnosed by the pallor, rapid pulse, abdominal tenderness, and nature of the blow received, give an opportunity for removal of the blood clot and suture of the tear in the liver, thus giving the patient a better prospect

than in those cases where the blow has passed unnoticed and a hæmatoma resulted, followed by suppuration.

A girl, æt. 14, was brought to the casualty room of the Bristol Royal Infirmary and admitted under Mr. Bush, with the history of having hurt her abdomen whilst playing, by falling across the curb-stone.

On admission she was very pale, perfectly conscious, and complained of pain in the umbilical region. *August 13th*, 1906: Temperature 99.2°; abdomen moves on respiration, nothing abnormal felt. *August 14th:* The child looks very ill, and has been vomiting all night. Face flushed, tongue dry, with a brown fur. Abdomen rigid and tender, especially at the upper part of the right rectus muscle. There is no increased dulness to indicate hemorrhage. Pulse 128. *Operation:* The abdomen was incised in the mid line above the umbilicus. In the extra-peritoneal fat were seen one or two spots of a light canary colour, which were thought to be fat necrosis. The omentum was found to be studded with these yellowish-white nodules, but the peritoneal coat of the bowel was free from them. In the right hypochondrium blood was seen free in the peritoneal cavity, and a small rupture of the liver was seen immediately to the right of the notch for the round ligament. There was no apparent rupture of the pancreas, the bleeding had ceased, the blood was removed, the liver rupture sewn up, and the abdomen closed. *August 18th:* On examination of the chest, cardiac pulsation could be felt to the right and left of the sternum, in the fourth and fifth spaces; apex not located. The cardiac dulness extended for one inch to the right and one inch to the left of the sternum in the fifth space, so that the heart has become displaced, and lay mesially behind the sternum. The lower part of the right chest in front yielded a curious tympanitic note on percussion, like that elicited over a pneumothorax or large cavity. Posteriorly, the right base had an impaired note with cavernous breathing, bronchophony, pectoriloquy, and a few crepitations. Over the left side of the chest the normal lung resonance was present, and the air entry was good all over. There was, apparently, nothing present in the left side of the chest to push the heart over to the right, and therefore it must have been pulled over by the changes occurring in the right side of the chest. *August 21st:* Right lung, consolidation of the lower lobe present; some pus expectorated. *August 24th:* Temperature 96.8°. Tubular breathing heard over the right lower lobe. The purulent expectoration still continued, and was accompanied by a little blood. The lung was clearing up, a few coarse crepitations were heard over the right base. *September 1st:* Expectoration had ceased; temperature normal. *September 23rd:* The girl left the Infirmary in perfect health.

In this case the abdominal tenderness and rigidity over the upper part of the right rectus muscle, together with the history of a blow, left little doubt of the diagnosis. At the operation the hemorrhage was found to have stopped, and the liver was sutured up, thus removing the possibility of fresh bleeding when the patient began to recover, and the blood-pressure to rise.

The reason for the fat necrosis is not obvious, but one must suspect that the pancreas was bruised, and that there had been some escape of pancreatic secretion, though, as far as could be seen at the operation, that organ was not ruptured.

The very unusual condition of the chest, which was apparent three days after the operation, could not have been due to any long-standing tubercular disease as was suggested at the time, because the patient went out well. The signs present were evidently those of pneumothorax, and this could only have been brought about by a laceration of the lung through the visceral pleura into a small bronchus; air escaped into the pleural cavity, the intra-pleural pressure was raised, and the lung collapsed. Under such circumstances it is usual to find the heart pushed over to the unaffected side—in this case to the left side of the chest—and I can only suggest that there had been some old standing pleurisy or mediastinitis causing the lung to be bound down to the pleura and pericardium, then when the lung collapsed the pericardium and heart were drawn over to the right.

A collection of blood in contact with air readily suppurates, and thus the blood effused into the lung tissue in connection with the bronchus became purulent, and was got rid of by expectoration.

Therefore, this girl had ruptured her liver and right lung, probably also bruised her pancreas, and yet made a perfect recovery.

Progress of the Medical Sciences.

MEDICINE.

Alterations in the rhythm of the heart.—Thanks to the work of Wenckebach, Mackenzie, and others, it is becoming possible to distinguish a number of types of cardiac arrhythmia, and to attach to each its proper meaning. These are reviewed and arranged in papers by Mackenzie[1] and Norris.[2] Underlying the whole subject are certain essential facts.

[1] *Quart. J. Med.*, 1908, i. 39, 131, 481.
[2] *Am. J. M. Sc.*, 1908, cxxxvi. 46.

1. In the human heart are relics of the primitive cardiac tube. These are (*a*) the sino-auricular node, placed near the opening of the superior vena cava into the right auricle; (*b*) the auriculo-ventricular node, lying in the auricular wall near the mouth of the coronary sinus; and (*c*) the auriculo-ventricular bundle passing from the node (*b*) into the ventricular walls. So far specialised fibres joining (*a*) with (*b*) through the auricular walls have not been discovered.

2. Each cardiac contraction begins with a stimulus, almost certainly intrinsic, exciting the heart first at the sino-auricular node. From this point the stimulus passes through the heart along the path of the primitive tube, from node (*a*) to node (*b*), and thence into the ventricles by bundle (*c*).

3. Cardiac muscle while contracting is refractory to further stimuli; these can only excite further contractions when they fall upon partly or wholly relaxed muscle.

The types of irregularity now to be described have been separated very largely by the study of tracings of the jugular pulse, taken by the use of some form of polygraph. Mackenzie's "ink polygraph" is the best for ordinary use.

(*a*) *Juvenile arrhythmia.*—This is only an exaggeration of the normal inspiratory increase and expiratory decrease of the pulse rate. It is seen in young people, neurasthenics, and those suffering from acute fevers. Such irregularities are common after diphtheria and scarlet fever, and it is important to realise their origin in nervous instability rather than in cardiac disease.

(*b*) *Extra-systoles.*—These are superfluous cardiac contractions due to abnormal stimulations of varying parts of the primitive tube. Mackenzie divides them into three classes—auricular, ventricular and auriculo-ventricular. Auricular extra-systole is caused by stimuli arising in those fibres (as yet not demonstrated) which run from node (*a*) to node (*b*); such stimuli will pass over to the ventricular wall, and, as in normal systole, the auricular contraction is followed, after an interval, by that of the ventricle. Ventricular extra-systole is due to stimulation of the auriculo-ventricular bundle in the ventricular side of the auriculo-ventricular node. This causes an abnormal ventricular systole, without any corresponding auricular contraction. Auriculo-ventricular extra-systole is an abnormal contraction of auricle and ventricle simultaneously, due to stimuli applied to the auriculo-ventricular node, and travelling thence both ways—back to the auricle and forward to the ventricle. This might be called an "occasional nodal rhythm." In one type of extra-systole, then, the auricle does not contract at all, in the auricular type it contracts as usual before the ventricle; while in the third type both auricle and ventricle contract together.

(*c*) "*Perpetual*" *arrhythmia.*—This is the irregularity met with in the serious heart failure of mitral obstruction and arterio-

sclerosis. Mackenzie believes it to be due to interruption of the passage of stimuli through the auricular walls by over-distension of the auricle; stimuli arise no longer at the usual spot, the sino-auricular node, but instead at the auriculo-ventricular node. Thus a "persistent nodal rhythm" is caused, characterised by simultaneous contraction of auricle and ventricle, as polygraph records show.

(*d*) *Heart-block.*—Recent papers on the Stokes-Adams syndrome are making us familiar with this class of arrhythmia. It occurs also in a less definite form—that of occasional dropping of beats—in arterio-sclerotics and persons recovering from influenza and other infections attacking the myocardium. In these conditions some lesion of the auriculo-ventricular bundle hinders the regular passage of stimuli from auricle to ventricle; the auricle beats regularly, but the ventricle loses a certain number of stimuli, and therefore of beats also. The radial pulse is therefore "slower" than the jugular.

(*e*) *Pulsus alternans.*—This, a rare form, is seen in cases of myocardial failure. There is a regular and persistent alternation of large and small pulse waves at the wrist. Wenckebach says that it begins with a systole slightly more effective than usual, for some reason; this would make no difference to the rhythm of a normal heart, but in a weakened ventricle it means a lengthening of the interval occupied by that particular beat. At the time, therefore, that the next stimulus comes down from the auricle to the ventricle it finds the latter still imperfectly relaxed, and therefore partially "refractory," so that the contraction provoked by this stimulus is weak and short. Being short, it gives the heart an unduly long rest, so that the ventricle is now able to answer the next stimulus by an abnormally powerful systole. This means another lingering diastole, another small systole, and so on *ad infinitum.*

(*f*) *Paroxysmal tachycardia.*—This is a "functional" disorder of rhythm, that is to say, it is not connected with any grave morbid change in the structure of the heart. Mackenzie believes it to be a periodic discharge of auriculo-ventricular extra-systoles; but Hirschfelder[1] and others, much impressed by the fact that in the paroxysms the heart beats exactly twice (less often exactly three or four times) as often as its normal rate, say that in such hearts there is always a great frequency of stimuli at the sino-auricular node, that between the attacks half of the stimuli (or in less common cases two-thirds or three-quarters) are stopped before reaching the ventricle, while in the attacks this hindrance is removed, and all the stimuli are allowed to pass through the ventricle. There is some experimental evidence in favour of this theory.

It is, of course, impossible to generalise with regard to the

[1] *Johns Hopkins Hosp. Bull.*, 1906, xvii. 337.

prognosis and treatment of conditions differing so widely in origin. Clearly it is useless to take arrhythmia into account in any case of cardiac disease without forming a definite opinion as to the nature and cause of the irregularity.

* * * *

Congenital idiopathic dilatation of the colon (Hirschsprung's disease).—A paper by Finney,[1] reporting a fresh case and summarising two hundred other contributions, gives a full account of this uncommon disease.

Ætiology.—In most cases the disease dates from birth or soon after; in a very few it seems to arise *de novo* in adult life. It much more commonly affects males. Heredity is of no importance. The actual origin of the disease is a matter of controversy, and many theories have been advanced. It has been ascribed to abnormal length of the meso-sigmoid, an abnormally long and looped colon, colitis causing gaseous distension, a developmental weakness of the colonic muscle, some obstruction in the lower reaches of the colon, spasm of the sphincter ani, a neuro-muscular defect of one segment of the colon, valvular formation in the mucosa, and so on. In Finney's case certain appearances suggested a kind of giantism, with lymphangiectasy (analogous to macroglossia) as the true explanation. Out of all these theories no single one can be held to explain all cases. It seems, however, that it is right to look upon the disease as congenital in a majority of cases, and to consider the "obstruction" factor as negligible. One point of importance is not remarked upon, namely the occasional association of dilatation of the colon with other congenital defects. In a case I saw, congenital heart disease, congenital cataract, enlargement of the colon, and Mongolism were all present in the same patient.

Pathology.—Nearly always it is the sigmoid loop that is chiefly enlarged. The dilated bowel may hold as much as 40 lb. of fæces, and a diameter of six to eight inches has been recorded. The wall of the colon is very thick, owing to muscular hypertrophy, and the meso-colon is thickened by the presence of many blood-vessels and lymph-channels. The mucosa is pigmented, and sometimes ulcerated; the surface epithelium is usually degenerate, and its deeper crypts relatively deficient in goblet-cells. There is general cellular infiltration of the sub-mucosa. The circular muscle is the more hypertrophied layer.

Symptoms.—There are two cardinal symptoms—constipation and abdominal enlargement. The bowels are extraordinarily difficult to move, even by the most forcible aperients and enemata. Patients have been known to go for three months without an action. When a motion is passed it is naturally very bulky, and pasty in consistency. The belly may be so enlarged that the skin

[1] *Sur., Gynec. and Obst.*, June, 1908.

is shiny and the recti parted. It is chiefly above the umbilicus that the enlargement is seen. Often peristaltic waves are visible, crossing the upper abdomen from right to left. At such times the colon is hard, but at others it is soft, and "splashes" when the fingers are thrust down into it.

Other symptoms that are met with belong rightly to two classes —those caused mechanically, and those which are toxic in origin. Among the latter may be mentioned mental apathy—a common feature— and tetany, which has been recorded.

Diagnosis.—A fæcal mass has before now been considered malignant until it has vanished under the influence of enemata; and the abdominal enlargement has before now led to a diagnosis of peritoneal tuberculosis.

Prognosis.—The disease cannot truly be cured. It does not often kill, except by allowing intercurrent affections to find an unresisting victim.

Treatment.—Aperients and enemata, with diet and abdominal massage, will often make the patient's state readily endurable, but in bad cases the bowels will become more and more difficult to move. Finney is led to uphold surgical treatment by the comparative success of such measures as judged from a tabulation of recorded cases. In his own case, a three-stage operation (colostomy above the dilatation, lateral anastomosis of colon to sigmoid, "side-tracking" the dilated portion, and finally colectomy) was highly successful.

* * * *

The part played by rheumatism in causing disease of blood-vessels.—A recent paper by Roch and Burnand, of Geneva,[1] dealing chiefly with peripheral rheumatic arteritis, also touches on other forms of blood-vessel disease due to acute rheumatism.

Rheumatic phlebitis has been described by so many writers, that we may consider its claims to recognition fully established. In eighty-eight autopsies of cases of rheumatic heart disease fatal before 16 in the Bristol hospitals' records, there was one case of phlebitis. In this case it was, as is usual, an inflammation of the jugular veins.

Rheumatic aortitis has also been written upon by many distinguished observers in this country and in France. Small patches of subendothelial inflammation are to be seen in nearly every case of fatal acute rheumatic carditis in the first two or three inches of the aorta. Further than this, however, it comes into clinical importance as an early stage of a process which may end in the formation of an aneurysm. This subject was dealt with some years ago by Sir R. Douglas Powell, while quite lately it has occupied the attention of other writers. Ralli,[2] in a graduation

[1] *Semaine Méd.*, March 25th, 1908.

[2] Inaugural Dissertation, Bukarest, 1907 (*Zentralbl. f. innere Med.*, 1907, xxviii. 1239).

thesis, speaks of rheumatism as a very important factor in the causation of aortitis and aneurysm in children. Feytaud[1] says that many cases of aortic aneurysm are met with in patients who have never had syphilis, but in whom a rheumatic attack is not long past. Such patients are usually young, and give a history of often-repeated bouts of rheumatism, each of which seems to add to the aortic enlargement. This usually arises from the ascending portion, and spreads forwards and to the right.

Coronary arteritis due to rheumatism has been several times discovered, and the relation between the coronary vessels and the interstitial lesions of rheumatic carditis is always very close. In a coronary arteriole in one of my own sections, the media was occupied and the lumen almost filled by one of the "submiliary nodules" characterising rheumatism of the heart wall.

Peripheral arteritis of rheumatic origin.—Of the many cases reported, Roch and Burnand consider that five only can be accepted: to these they add a sixth observed by themselves. They divide the cases into two classes. In the first of these the inflammation was apparently parietal, and attacked the media principally; the symptoms being tenderness, pain and increased pulsation at the point of disease. The other group included two cases only, those in which the inflammation led to the temporary or permanent obliteration of long segments of arteries, with abolition of the pulse and the appearance of nodose swellings along the course of the vessel. They give their reasons for believing that in these cases the lesion was arteritis, and not embolism; but their statements, though sane and convincing as far as they go, are not supported by any *post-mortem* evidence, so that it is not yet possible to consider the existence of a peripheral rheumatic arteritis (apart from embolism) as proved. It is worth noting, in conclusion, that Hanot believed acute rheumatism to be productive of arterio-sclerosis, an idea which has lately found a supporter in Fremont-Smith,[2] who assigns a prominent place to rheumatism as a cause of arterio-sclerosis in early life.

CAREY COOMBS.

SURGERY.

On a former occasion we reviewed the progress of **gastro-enterostomy for benign conditions of the stomach and duodenum,**[3] and sufficient time has elapsed to enable conclusions to be drawn from the ultimate results of a large number of cases following operation on modern lines. The risk of operation has been reduced to a minimum; much has been learned in pathology from direct observation; and it only remains to give more atten-

[1] *Thèse de Paris*, 1906. [2] *Am. J. M. Sc.*, 1908, CXXXV. 199.
[3] *Bristol M.-Chir. J.*, 1906, XXIV. 254.

tion to the selection of suitable cases for relief, eliminating unsuitable ones, and to determine the amount and the permanency of the relief afforded. Such data can only be obtained from a careful study of a large number of cases after sufficient time has elapsed, and at the meeting of the American Medical Association, in May last, three surgeons of repute were able to furnish the profession with such particulars.

Dr. W. J. Mayo[1] pointed out that no case was operated upon until a reasonable amount of medical treatment had failed, and that no case should be considered cured until two years had elapsed after operation. In earlier work technical errors occurred, and the operation was applied without due discrimination, and in some cases upon erroneous diagnosis, for modern surgery has shown that ulceration may be absent although diagnosed clinically. Dr. Mayo and his brother have operated on 540 cases of ulcer of the stomach and duodenum. Of twenty-seven cases of acute perforation, in five primary gastro-enterostomy was done, with two deaths; but out of eighteen which recovered after suture and drainage, only one required a secondary gastro-enterostomy.

Before the year 1900 an anterior anastomosis was done, with a mortality of 6 per cent., and many have remained well from eight to fifteen years. From 1900 to 1905 operation was extended to cases without obstruction, but the results were not so favourable, owing to technical imperfections and to the fact that experience shows that it is best to excise gastric ulcers occurring to the left of the pyloric end. At this time the posterior "no-loop" operation became the method of choice, and three hundred of such operations have been performed, with a mortality under 1 per cent., and only 1 per cent. of secondary operations have been required. At this period many operations were done on the clinical diagnosis of ulcer rather than on the operative, the operation as well as the diagnosis proving to be a mistake.

Since 1905, if the ulcer could not be demonstrated at the time of exploration, no operation was done unless necessitated for hemorrhage. Three hundred and seventy-nine cases were operated upon two years ago, with a mortality of 4.8 per cent. In sixty-four no ulcer was actually demonstrated at the time of operation, and eleven of the sixty-four patients required secondary operations, only two of which showed that an ulcer had been overlooked at the former operation. These may be regarded as questionable cases, and, roughly speaking, one-third were cured, one-third improved, and one-third unimproved. Of 234 cases of demonstrated ulcers which were traced, over 80 per cent. were cured, 9 per cent. improved, and 4 per cent. unimproved, showing a total of about 90 per cent. cured or improved.

Dr. John B. Deaver[2] was able to trace sixty-six patients on whom he had performed operations for benign disease. Forty-

[1] *Ann. Surg.*, 1908, xlvii. 885. [2] *Ibid.*, 894.

four were free from all gastric symptoms, nine are greatly improved, five are unimproved, and eight have since died, giving 66 per cent. of cures and 80 per cent. greatly improved. The author goes into detail concerning the cases, and we may refer to the original article, but the following summaries may be of interest :—In ulcer of the stomach 62 per cent. were cured and 16 per cent. improved. Of twelve cases of duodenal ulcer, there were over 90 per cent. of cures ; and in stenosis of the pylorus and in gastrectasis there were some 65 per cent. of cures. The conclusions he draws from an analysis of his cases are those generally recognised by surgeons at the present time.

Though not so numerous as the cases analysed by the Mayo brothers, the tabulations of results by Moynihan are valuable from the point of view of practical completeness.[1] We may first summarise the lessons which he draws from a study of them. 1. The operative treatment of stomach disorders should be confined to those cases in which an organic lesion can be demonstrated at the time of operation ; and operation should not be performed as a rule if no lesion can be found, but one must regard the case as a diagnostic error. 2. In case of acute perforating ulcer, the perforation should be closed or the ulcer excised. When the ulcer is prepyloric, pyloric, or duodenal, gastro-enterostomy should also be performed. 3. If an ulcer be placed on the lesser curvature at some distance from the pylorus, in such a position that no obstruction is offered to the onward passage of food, excision should be performed, for relief by gastro-enterostomy may be incomplete. 4. If the ulcer be prepyloric, pyloric, or duodenal, gastro-enterostomy should be performed. It is desirable also to infold an ulcer whenever possible, for both hemorrhage and perforation have occurred from ulcers for which gastro-enterostomy had been performed months or years before. 5. The most satisfactory method of gastro-enterostomy is the posterior " no-loop " operation, with the almost vertical application of the bowel to the stomach according to his view. A deviation to one side or the other is of no importance, and entails no untoward consequences. 6. Regurgitant vomiting occurs as the result of the " loop" operation, whether anterior or posterior, and can be effectively cured by entero-anastomosis. 7. In cases of " hour-glass stomach " double operations are frequently necessary. . . . There were twenty-seven cases of perforating ulcer of the stomach and duodenum, of which eighteen recovered ; in six cases gastro-enterostomy was simultaneously performed, and in two cases subsequently, *i.e.* in eight out of eighteen. The cases suggest the desirability of gastro-enterostomy being performed when the ulcer is at or near the pylorus, and of excision of the ulcer when it is near the lesser curvature and away from the pylorus.

[1] *Ibid.*, 873.

For acute hemorrhage twenty-seven patients were submitted to operation, with two deaths. Reports have been received from twenty-two—eighteen were regarded as absolutely cured, one was improved but delicate, and three had bilious vomiting afterwards.

Of gastric and duodenal ulcers there were 174 cases, the ulcer being demonstrated in each. Of eleven cases in which no demonstrable ulcer was found, only three are described as being cured, one died from uræmia, six are no better, and in three improvement is doubtful. It is interesting to note that all the three cases on which pyloroplasty was performed required gastro-enterostomy subsequently. Post-operative vomiting occurred in twenty-two cases, and post-operative hæmatemesis in two cases. In twelve cases the patients are reported to be no better, six of them having no demonstrable lesion at the time of operation. In five cases occasional vomiting occurred associated with indiscretions in diet. In ten cases the improvement was doubtful, the majority of them having occasional vomiting, and resorting to medical advice at times. They comprise cases in which the ulcer was at some distance from the pylorus. In seven cases death occurred from malignant disease of the stomach at the site of the ulcer, all within four years of the time of operation. There were twenty-two cases of "hour-glass stomach," with three deaths, seventeen known to be alive and well.

The ultimate results have proved to be as follows:—211 patients are cured, nine patients are improved, twelve are no better, nine are doubtful, and six not reported. Thirty-four patients are dead: eighteen as the result of operation, seven of carcinoma of the stomach, and nine from causes unconnected with the stomach or operation.

From the foregoing it will be seen that much has been already accomplished, and that a high percentage of success follows the surgical treatment of benign conditions of the stomach and duodenum which have resisted a reasonable amount of medical treatment. In a considerable proportion of cases of cancer of the stomach there is a distinct history of previous gastric ulceration, and it would be interesting, as well as a valuable indication in treatment, to know what proportion of simple ulcers eventually become malignant.

T. CARWARDINE.

OPHTHALMOLOGY.

The extensive use of protargol, argyrol, and other silver-albumen preparations in cases of **ophthalmia neonatorum** has of late been somewhat checked by the publication of the results of laboratory experiments. For example, the admirable work of Kelly[1] shows that to destroy staphylococcus pyogenes aureus, the

[1] *Brit. M. J.*, 1907, ii. 1475.

solution of protargol has to be 256 times as strong as a silver nitrate solution in order to produce the same effect. The bactericidal action of argyrol is even less than that of protargol, and many have therefore assumed that it has little or no clinical value. In consequence of this, many practitioners are reverting to the use of nitrate of silver solutions.

Cragin, in the *American Journal of Obstetrics*, July, 1907, publishes the results of prophylactic methods in 8,000 confinements at the Sloane Maternity Hospital. In ophthalmia neonatorum he includes all cases of purulent conjunctivitis in the newborn. The latest statistics show that 67.14 per cent. of these cases are due to infection with gonococci. Of the remainder, about 10 per cent. are due to pneumococci, 8 per cent. to bacterium coli, whilst a smaller proportion are due to Koch-Weeks' bacillus, streptococci, staphylococci, &c., acting either separately or in association. Owing to the enormous preponderance of gonococcal cases (which include all the more serious ones), distinction between the various causative agents is hardly necessary. The following silver solutions were used, viz. silver nitrate, 2 per cent. (Credé's method); silver nitrate, 1 per cent.; protargol, 5 per cent.; argyrol, 10 and 20 per cent. The proportion of cases infected, in spite of the prophylactic used, varied from 18 per thousand with the 2 per cent. silver nitrate to 34 per thousand with the 1 per cent. silver nitrate. The 4,000 cases treated with the argyrol solutions showed about as good results as the silver nitrate cases. During the use of the 2 per cent. nitrate of silver solutions, the irritation of the eyes, with the accompanying œdema and discharge, was so great that it seemed to be a source of danger, although no eyes were lost, and no corneal opacities produced. He therefore used a 1 per cent. solution for the second thousand cases. Testing the bactericidal powers of silver salts, Cragin found that argyrol had practically no effect on streptococcus and staphylococcus, but that a 20 per cent. was rapidly fatal to the gonococcus. Assuming that the gonococcus is the microbe to be most dreaded, and that argyrol gives as good clinical results as 2 per cent. silver nitrate (and better results than the 1 per cent. solution), he advocates the use of argyrol as the best prophylactic against ophthalmia neonatorum. For the curative treatment he recommends cleansing with boracic lotion every twenty minutes, and the instillation of 20 or 30 per cent. argyrol every two to four hours. In cases of ophthalmia which resist argyrol, he advises the occasional use of 1 or 2 per cent. nitrate of silver solutions.

In his recent work on *Ophthalmia Neonatorum*, Sydney Stephenson to a great extent confirms the above statements. He, however, prefers a 1 per cent. nitrate of silver solution as a prophylactic, which, he says, "is fully protective, and in the present state of our knowledge may be regarded as the most efficient solution to employ in the preventive treatment of

ophthalmia neonatorum." Statistics collected by various investigators of more than 36,000 babies show less than five cases per thousand when this prophylactic is used. A 1 per cent. solution of nitrate of silver would appear to have certain practical advantages: it is cheap, and may be fairly safely used by an imperfectly instructed midwife. It is usually easy to tell if the solution has been spoilt by keeping. Protargol and argyrol are relatively much more expensive, solutions are more difficult to prepare, and do not keep well. Some of the disappointing results from their use are no doubt due to this last fact.

In the treatment of ophthalmia neonatorum, Stephenson fully agrees with Cragin as to the great value of argyrol, but would not recommend its use more than three or four times in the twenty-four hours.

Recurrent paralysis of the third nerve.—Prof. C. E. Finlay reports a case,[1] and refers to eighty-eight other recorded cases. The condition has been known for nearly fifty years. It is most frequent in young adults, and is probably far more common (in a mild degree at any rate) than the literature of the disease would indicate. Charcot, in 1890, called it ophthalmic migraine, under which title it is still often described. Finlay recognises four stages of the affection:—1. Periodic hemicrania, with no visual aura (scotoma scintillans and hemianopsia fugax), the attacks lasting from a few hours to a few days. In this stage there is no paresis during or after the attack. 2. The attacks of pain cease suddenly, and are followed by symptoms of paralysis, generally affecting only the third nerve, but the fourth or sixth nerves may rarely be affected instead. During the intervals between the attacks the affected muscles recover. 3. Similar attacks, but paresis of one or more muscles persisting between the attacks. 4. In this stage the paralysis is permanent, the attacks of pain recurring at irregular intervals. Vision, apart from accommodation and fixation, is not affected.

The attack proper has two periods—(*a*) Sudden increasing pain centred round the eye, accompanied by nausea, lasting hours or days, and culminating in vomiting; (*b*) the period of paralysis, usually complete and total, lasting from several days to several months, followed by gradual recovery.

The symptoms must be distinguished from those found in some cases of ocular paralysis in locomotor ataxy, cerebral tumours, cerebral syphilis, nuclear paralysis, and hysterical paralysis. It is perhaps with this last that it is most likely to be confused, but the visual fields show no limitation. It has been pointed out that excepting the attacks and the paralysis, there are no nervous symptoms whatever. By a process of exclusion, the disease can be located in the basilar portion of the third nerve. Charcot regarded it as a vasomotor disturbance followed by

[1] *Arch. Ophthal.*, 1908, xxxvii. 1.

nutritive changes. Four cases have been examined *post-mortem*. All showed fibrinous exudate surrounding the third nerve. The prognosis, so far as the ultimate result is concerned, is unfavourable. Strychnine and iodide of potassium appear to offer the best prospect of relief.

Tests for colour vision.—A committee of the Ophthalmological Society has been appointed to investigate the question of colour blindness, and the tests for its detection. "Holmgren's Wools," no matter how carefully used, are not sufficiently accurate in all cases; the defective candidate may be passed and one with practically perfect colour vision refused. The spectroscope furnishes the best test. By means of a fixed and a movable spectrum, fitted with suitable shutters, and both projected upon the same screen, a subject can be required to match any isolated portion of one spectrum with a similar portion of another. Though not of the same scientific accuracy, Edridge-Green's "signal lamp," which can be easily fitted up in an ordinary consulting-room, is sufficiently accurate for all practical purposes. By means of an iris diaphragm and coloured glasses, the light can be varied in colour and intensity. It would be a matter of interest and practical importance to study the effect of fatigue, both bodily and retinal, upon colour perception.

Transplantation of the cornea.—The editor of the *Ophthalmic Review*, in the January number, 1907, gives an epitome of what must be regarded as by far the most successful case of keratoplasty hitherto recorded. A workman, aged 45, received extensive lime burns of both corneæ. Sixteen months later Zirm was able to transplant pieces of a healthy cornea from a boy aged 11, whose right eye was so injured as to necessitate excision. The technique was as follows: Immediately after enucleation the eye was placed in warm normal saline solution. The workman was anæsthitised, and a conjunctival bridge was dissected up below the right cornea. Then, by means of v. Hippel's trephine (probably about 5 mm. diameter and worked by a spring), a disc of cornea was removed from the enucleated eye, and an exactly similar disc was removed from the leucomatous cornea. The transparent disc was placed in the gap, and the bridge of conjunctiva was drawn over it by sutures. Another disc was removed from the enucleated eye, this time from the centre of the cornea, and placed in a corresponding trephine hole in the patient's left cornea. It was an exact fit, and was secured in the same way, with a conjunctival flap. The right eye was a failure, and had to be excised, but the graft in the left eye remained clear, and in six months the vision of the left eye was 3-20 and J.13. Zirm attributes the success to the fact that the graft was from a young and healthy cornea. It was floated into position with a minimum of handling, and the patient's cornea was superficially vascular. He suggests that in future cases he would "raw" the cornea all round the area to be

trephined, and cover it with a bridge of conjunctiva dissected up from below and brought right across the future gap. This would provide vascularity right up to the graft, which would be inserted as soon as the irritation had subsided.

Arnold Knapp[1] adds one more to the lengthening list of undesirable results following the use of **Calmette's ophthalmo-reaction.** The patient was a girl aged 9, with scrofulus superficial keratitis in the right eye of two months' duration. Otherwise she was healthy, and her family history good. Treatment was unsatisfactory, and an intractable ulcer formed on the lid margin. On December 14th, 1907, one drop of a 1 per cent. tuberculin solution was instilled in the left eye, which had never been affected. There was severe reaction in six hours, and the temperature rose to 100.4° F. Under treatment the swelling of the lids abated, but the conjunctiva remained red and thickened. Ten days later corneal infiltrations appeared, arranged in three groups near the margin. New blood-vessels and infiltration appeared in the superficial layers of the corneal stroma. By January 28th they had coalesced, and the infiltration had begun to spread over the centre of the cornea. The author concludes: "This is a typical tuberculous process in the cornea, and as it came on after the use of the tuberculin solution in a previously healthy eye, a connection seems very probable. This unfortunate case demonstrates that the ophthalmo-reaction cannot be regarded as harmless." The difficulty of convincing a patient (or perhaps a jury) that interstitial keratitis, occurring under such conditions, was due to a constitutional cause demands that great caution should be exercised in using the reaction. An abstract of Schiele's work[2] shows that a reaction is almost invariable in trachoma and follicular conjunctivitis. Parkes Weber states[3] that the solution placed in healthy eyes of healthy subjects produced a positive reaction if they read all the succeeding evening.

CYRIL H. WALKER.

Reviews of Books.

BOOKS ON MEDICINE.

Heart Disease and Thoracic Aneurysm. By F. J. POYNTON, M.D. Pp. x., 310. London: Oxford Medical Publications. 1907.

It is difficult nowadays to write a short book on diseases of the heart, and at the same time to deal adequately with the subject. Dr. Poynton, in this manual, has attained a certain

[1] *Ibid.*, 171. [2] *Oph. Rev.*, June, 1908.
[3] *Brit. M. J.*, 1908, i. 386.

measure of success in his task, but it seems to us that he has tried to give too much detail without sufficient explanation. The section on rheumatic heart disease is, as would be expected, the best. Dr. Poynton describes this form of heart disease as due to infection by the diplococcus rheumaticus, but justly observes that, if this etiology be not accepted, the facts that are stated about the morbid anatomy still hold good. The chapters on chronic valvular disease and on myocardial affections are also good, and likely to prove helpful to the student. The advice as to treatment is in all cases sound. We think, however, that the dose given for erythrol tetranitrate as an initial one is too large. Some patients are very susceptible to this drug, and made uncomfortable by it unless the dose is a small one. The author does not believe that the salicyl compounds have a specific action against the rheumatic poison. The subjects of arrhythmia and irregularities of the cardiac action, and the methods of studying them by polygraphic tracings, receive very inadequate treatment, which is somewhat surprising in a new book on heart disease, considering the large amount of work that has recently been done upon them, and their importance from the light they throw upon the heart's action in disease. We think also that the student should be recommended to learn the use of the straight stethoscope, and that the beginner will find the heart sounds both more distinct and more easily timed with it than with the binaural. The section on aneurysm is very short. We can only suppose that this is intentional, and that the author thought it best to give only a short sketch of the most important features. We think that the duration of a rupture of an intrapericardial aneurysm into the pulmonary artery is to be measured by weeks rather than months. Attacks of so-called "asthma" should also be mentioned as often an early symptom of aneurysm in this situation.

The book is clearly written, but suffers from over-condensation. The chief features of the different forms of heart disease are well brought out, and the advice as to treatment, as stated above, is uniformly sound. No doubt the student who masters this book will have a good basis to go upon for his clinical work. Appendices contain prescriptions, diets, and directions for Schott exercises and Nauheim Baths.

Arterial Hypertonus, Sclerosis and Blood Pressure. By WILLIAM RUSSELL, M.B. Pp. ix., 194. Edinburgh: William Green and Sons. 1907.

This is a very interesting book and well worth study, if we wish to understand what the pulse and the sphygmometer really indicate, whether we accept all the writer's conclusions or no. He argues that "thickened" or "hard arteries" are most frequently due to a hypertrophied muscular coat, and that this is

often in a state of excessive contraction, sometimes even causing a feeling of rings like those in true atheroma. These "hypertonic" vessels readily relax and contract, and are perhaps more prone to do so than normal vessels.

Arterial contraction and relaxation, again, is largely produced by the direct action on the vessel walls of various substances in the blood, and not only by the vaso-motor nerves. This action affects not only the periphery, but the greater part of the vascular system. The brachial and radial vessels contract as well as the arterioles or capillaries. Contraction produces a rise of pressure, strictly speaking, above or behind the contraction, not necessarily in the contracted area. When we apply a sphygmometer to the brachial we find sometimes pressures of 150 to 250 mm. indicated, yet we know that in young and healthy males the pressure does not exceed 95 to 120, which under violent exertion can be raised to 140, the extra 20 representing the reserve power of the heart. Is it possible that the hearts of weak old people, then, can sustain a pressure of 200 to 250 mm. ?

Russell's reply is that these apparently enormous pressures are chiefly due to the resistance of the thickened vessel wall, and only in small part to the blood pressure. Still, sphygmometer readings are of value, for they show, by their variations from day to day, the varying condition of the patient and the effect of remedies; while as to normal vessels, he allows that their results have been confirmed by manometers in the living body.

He supports his argument by tests on a mechanical model of ingenious construction, but it is rather hard to see how he would account for the rise to 300 or 400 mm. which occurs in traumatic cerebral compression. Hypertrophy of the muscular coat cannot occur in an hour.

There is a useful chapter on the high tension produced by constipation, excess of proteid, and in some persons by alcohol; but he gives no proof that alcohol has any action except as a gastric irritant, and does not even refer to its dilator effects. We question whether the fashionable ascription of disease to intestinal toxins has much more proof than the animal spirits or miasma of older writers. Still, it is a working hypothesis.

He applies his theories with much success to the explanation of transient and recurrent cerebral paralyses, showing that many cases are probably due to hypertonic contraction or spasm of cerebral vessels. Though these vessels are not governed by the systemic vaso-motor centre, they may be acted on directly by toxins in the blood. Transient paralyses in uræmia are perhaps of this type, and the importance of distinguishing them from those due to hemorrhage or thrombosis is very great.

The whole book is most suggestive, though much of it is in direct opposition to accepted ideas, and much may ere long be shown to be incorrect.

Green's Encyclopædia and Dictionary of Medicine and Surgery. Vol. VI.—*Lumbar Region—Nephrotomy.* Edinburgh: Wm. Green & Sons. 1907.—This volume contains forty-eight articles of more than a thousand words, that on the lungs reaching sixty-nine pages. We have perused the article on malaria, and find that it contains a record of all the newest work on the subject. That on tuberculosis is written by Dr. R. W. Philip, and contains the views of a noted specialist on everything relating to sanatoria and the sanatorium treatment of tubercular diseases. Like its predecessors, this volume may be relied upon to give the best information on the subjects included in its alphabetical scope.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. VIII. Physiology—Rhinolatia. Edinburgh: Wm. Green and Sons.—The monograph on physiology occupies nearly one hundred pages, and it deals at some length with the internal secretions, or hormones, their production and action. The supra-renal bodies, the pituitary body, the thyroid, parathyroid, and other hormone-producing glands, appear at the present time to be endowed with various mystic qualities, which are presumed to be of great importance in the theories of toxic action and immunity. Dr. D. Noel Paton points out their importance in connection with the action of opsonins; but it seems well to suspend our judgment on many of the theoretical views of which Dr. Sajous is a distinguished exponent. Fifty-eight articles are of more than one thousand words in length. The volume contains 1037 subject headings, for the most part of the highest accuracy and value.

A Chronology of Medical History. By JAMES YOUNG. M.D. Pp. 91. Bristol: Edward Everard.—This chronological record of the famous names and important events connected with the history of medical science has been compiled from the larger works with much judgment and care. It begins with the first physician recorded in history, at the time of the fifth Egyptian Dynasty, 3500 B.C. The first known work on medicine, "The Ebers Papyrus," is dated 1550 B.C., and three hundred years later comes the time of Esculapius, 1250 B.C. Some two thousand years later came the prince of physicians—Avicenna, the Arabian Galen—the foremost representative of Moslem science, when the great universities of Bagdad, Damascus and Alexandria flourished, and when the cities of Cordova, Toledo and Seville were in their zenith as centres of learning. It is interesting to note that St. Bartholomew's Hospital was founded not long after, in 1123, and St. Andrew's University followed in 1411. The records continue to the close of the Victorian era, but the author wisely refrains from any description of the distinguished men who are happily alive at the present day.

History of the Medical Society of the State of New York. A centennial volume. By JAMES J. WALSH, M.D. Pp. 208. Published by the Society. 1907.—This volume is made up chiefly of excerpts from contemporary writings, by which the contemporaries are allowed, as far as possible, to tell their own tale. Historical accuracy has gained much by this method, but the author has carefully edited the various abstracts to make the story complete.

Contributions to the Science of Medicine and Surgery. By the Faculty, in celebration of the 25th Anniversary, 1882-1907, of the Founding of the New York Post-Graduate Medical School and Hospital. 1908. HENRY T. BROOKS, M.D., Editor.—This elegant volume, of nearly five hundred well printed pages, consists of papers on a great variety of subjects, such as are usually dealt with in post-graduate teaching. It shows how post-graduate opportunities have developed in the United States within the last quarter of a century. Clearly it will be difficult to surpass these post-graduate schools for real, earnest, enthusiastic work and development of technique. The obituary notice of the founder, and only president, of the Post-Graduate Medical School of New York is a fitting preface to the valuable mass of original work described in the pages which follow.

Fevers in the Tropics. By LEONARD ROGERS, M.D., B.S., F.R.C.P., F.R.C.S. Pp. 343. London: Henry Frowde and Hodder and Stoughton. 1908.—The subject of this volume is one of great importance to those resident in the tropics, and we have no doubt that the book will be heartily welcomed on the other side of the equator. But in Britain also it will be widely referred to, for in addition to descriptive detail, it contains the records of a large amount of original observation. Professor Rogers should be heartily congratulated upon the issue of so valuable a publication. After an account of the evolution of our knowledge of Indian fevers, and of the technics of blood examinations, the fevers of long duration are considered. These include kala-azar, trypanosomiasis and sleeping sickness, typhoid and paratyphoid, relapsing and African tick fevers, Malta or undulant fever, the pre-suppuration stage of amœbic hepatitis, epidemic dropsy, and some unclassified long fevers. Tropical typhoid presents many characteristic features of interest, and Professor Rogers has written this in a way which makes it very useful for purposes of reference. The section on Malta fever contains all the recent work of the Commission. With regard to the agglutination test, a dilution of 1 in 80 is recommended as necessary for diagnosis of the condition. Under epidemic dropsy is described a condition in which œdema of the extremities, most marked in the feet and legs, but often extending up to the thigh and abdomen, is associated with low, remittent or intermittent

fever, commencing without any rigor and marked diarrhœa. The fevers of short duration comprise malarial fevers, dengue, plague, yellow fever, heatstroke, sunstroke, typhus, cerebro-spinal fever, influenza and the exanthemata. There are eleven good plates, and a number of illustrations and charts.

Traité du Paludism. By A. LAVERAN. Second Edition. Pp. 622. Paris: Masson. 1907.—This treatise will be found of great value by those who need to refer to the source of some of the statements contained in our numerous English text-books on the subject. The illustrations are good, and the descriptions clear and concise. Every scientific worker will welcome heartily this second edition, and will be glad to know that, tardy though the recognition has been, Laveran's early discoveries are at last gaining their due amount of acknowledgment.

Transactions of the College of Physicians of Philadelphia. Vol. XXIX. Philadelphia: Printed for the College. 1907.—One of the most interesting and useful papers in this volume is that on "The Treatment of Chronic Diseases of the Heart," by Professor Theodore S. Schott, of Nauheim, who, in conjunction with his late brother, August Schott, was the founder of the Balneogymnastic treatment of chronic heart disease associated with the name of Nauheim. After a brief review of other mechanical methods, more particularly that of Oertel and the Swedish method (that of Zander), he describes how, by means of balneologic, as well as gymnastic treatment, the heart becomes stimulated to a more forcible and vigorous systole. The baths acting through the sensory nerves, and the gymnastics acting through the motor nerves, achieve a similar result, and a bed-ridden patient may be relieved and strengthened to such an extent that he may be able to conclude his treatment with mountain climbing if the heart muscles have really become strong enough to bear the increased strain without undue risk.

Diphtheria in Practice. By W. F. LITCHFIELD, M.B. Pp. 96. London: Baillière, Tindall & Cox. 1908.—Following the short introduction is a chapter on cause and prevention, a simple outline sound as far as it goes, but it is not enough to state that "it would not appear that faulty sanitation plays an important part in the spread of diphtheria," for drains and diphtheria have no interdependence whatever. Again, the disinfection of rooms, etc., by sulphur is recommended as though it was our chief and best method, a mere passing note being accorded to the formalin spray. In the next chapter, on diagnosis, the value of clinical symptoms is emphasised, due regard being paid to the necessity for bacteriological examination in cases leaving room for doubt. But no mention is made of the use of direct cover slip examination of the suspected secretion, whereby valuable time may be saved in many cases. There is a truly colonial flavour in the remark

that by the measures described the majority of cases "can be spotted right off." But farther on we find no clear directions for differentiating laryngismus stridulus and catarrhal laryngitis from diphtheria. We should expect clearer directions for the time that should intervene between the swabbing with antiseptics and taking a culture. The description of the various forms of the diphtheria bacillus is quite inadequate for a monograph. Good and very practical chapters on tracheotomy, intubation and on feeding will be found useful. The teaching is sound and practical, and much information of value in practice will be found in the small space the author has allowed himself.

Third Annual Report of the Henry Phipps Institute for the study, treatment and prevention of Tuberculosis. Pp. 410. Philadelphia. 1907.—This very elaborate Report gives an account of the work of the third year of the Institute; also a continuation of the report on the Maragliano serum treatment, a statistical study of the influence of the Henry Phipps Institute on the death-rate from tuberculosis in Philadelphia, and a report of some of the scientific work done by members of the staff of the Institute during the year.

It is disappointing to find that the serum treatment has been of no practical value, according to the present method of using it. It is hoped that some better ways of using what should be a successful method may be discovered.

Some Successful Prescriptions. By A. HERBERT HART, M.D. Pp. 17. London: John Bale, Sons and Danielsson Ltd. 1907.—The author wrote these on Monday, after the evening surgery. He might go on in this way for a whole year, but we fail to see the utility of a prescription for "skin diseases" and one for "malingerers." There are fifteen prescriptions; there is nothing new in them, and whatever is good is too familiar to be worthy of publication in a booklet.

The Prevention of Infectious Diseases. By JOHN C. M'VAIL, M.D., D.P.H. Pp. xv., 290. London: Macmillan & Co. Ltd. 1907.—This work comprises the Lane Lectures delivered at Cooper Medical College, San Francisco, in 1906. They are quite excellent, and reflect the experience and good judgment of the author on every page. They deserve to be read and re-read by all interested in public health who have passed beyond the student stage.

BOOKS ON DISEASES OF THE NERVOUS SYSTEM.

Diseases of the Spinal Cord. By R. T. WILLIAMSON, M.D. Pp. xi., 432. London: Oxford Medical Publications. 1908.

Dr. Williamson's contributions to neurology, especially to diseases of the spinal cord, have been of the highest order, and

this book embodies the results of many years' teaching and experience. The work is written to serve as a text-book, and the author is to be congratulated on having succeeded in producing an excellent one. Besides embodying his own experience, the book affords internal evidence of his wide acquaintance with the literature. In view of the great extent of this literature, he has done wisely in not attempting to give a complete bibliography in a text-book, and in adopting the more useful plan of indicating to the student the authorities most worth consulting. With regard to the book itself, a few minor criticisms may be made. The chapter on the functions of the cord is not so good as the other introductory ones, and hardly deals adequately with the matter, *e.g.* with regard to the important subject of reflex-actions, their co-ordination, etc.

The classification adopted for diseases of the cord does not work out very happily. Thus, to carry it out, Landry's paralysis and syringo-myelia come into the group of diseases causing atrophic paralysis, and disseminated sclerosis forms, with primary spastic paraplegia, a separate group, with spastic paralysis or paresis as the classifying symptom—surely a curiously assorted pair. Though one can see that in this classification the author had in his mind the dominant symptom in the majority of cases of the diseases in question, to anyone beginning the study of diseases of the cord such an arrangement is likely to be confusing, and to lead to misconception of the nature of such a disease as, for example, disseminated sclerosis. It is only fair to add that the author carefully states the difficulty with regard to Landry's disease, and points out that muscular atrophy in the typical cases is absent. We have noticed very few omissions, but in the differential diagnosis of the causation of atrophy of the small muscles of the hands we could find no mention of its occurrence in cases of cervical ribs. On pages 259 and 261 the heading at the top of the page is wrong.

We have mentioned these minor defects as they may easily be corrected in future editions, and having found fault to this extent, we hasten to add that the book is undoubtedly an excellent one, and is brought up to the most recent neurological work on the cord. The sections on pathological anatomy are good throughout, the illustrations—the large majority of which appear to be from original preparations by the author—are both well executed and well chosen, so that they materially help the text. Whilst saying that a uniformly high standard is maintained throughout the volume, it should be added that some of the sections go far beyond the ordinary text-book, and should be read by every neurologist. We should strongly advise any of our readers who require a practical and adequate guide to the diseases of the spinal cord to get this.

The Major Symptoms of Hysteria. By PIERRE JANET, M.D. Pp. 345. London: Macmillan & Co. Ltd. 1907.

These lectures were delivered by Professor Janet at the inauguration of the new buildings of the medical school of Harvard University at the end of 1906. The lectures are so well expressed and arranged, and at the same time treat the subject in such an interesting manner, that one gains pleasure as well as profit from reading them. Those who are not already acquainted with the author's views should procure this book, which presents them most lucidly, and at moderate length. Professor Janet's work has done much to elucidate hysteria by a process of analysis of the psychical phenomena which lie at its root. We may remind our readers that according to his view these phenomena comprise the occurrence of certain somnambulistic states—that is, of states which may roughly be called "absent-mindedness;" of dissociation of consciousness, extending in its fully-developed form to dual personalities; of limitation, or restriction of the field or range of conscious thought and action; and, lastly, of a lowering of the mental level. We do not suppose for a moment that the last word has been said about hysteria, but no one can read this book without learning something more about the disease, and the modern attempts to explain its nature and origin. Many writers, when they deal with hysteria, either at once become obscure, or make no attempt to inquire into its real nature. This does not apply to Professor Janet, who remains admirably clear throughout, even in the most difficult parts of his subject, so that one can never mistake his meaning. We feel sure that this is a book which, once taken up, will not be left unfinished.

Epilepsy: A Study of the Idiopathic Disease. By WILLIAM ALDREN TURNER, M.D. Pp. xi., 272. London: Macmillan & Co. 1907.

This book can be cordially recommended as giving an excellent account of the modern views on epilepsy. Dr. Turner, during his long experience at the Chalfont Colony for Epileptics, and at the National Hospital in Queen Square, has had exceptional opportunities for studying the disease, and in this work are embodied his mature conclusions. The reader will, for one thing, learn from it that the outlook is not so hopeless in epilepsy as is often thought; that a considerable percentage of cases show an arrest of the disease under appropriate measures of treatment, and for a further number, in whom this fortunate result is not obtained, much may be done to mitigate their affliction and provide them with suitable occupations. There is no doubt

that the "colony" treatment marks a very distinct advance in dealing with epileptics, and in ameliorating their lives.

The book gives a very thorough clinical study of epilepsy. The chapters on the mental changes which occur in the disease, and on prognosis, are particularly valuable. The pathological basis of the affection, so far as it is at present known, receives entirely adequate treatment. In the author's opinion, the immediate cause of the fits is cortical stasis, resulting from obstruction to the blood supply by intravascular clotting. The book concludes with a full account of the treatment of epilepsy, which will be found very useful, and an appendix on Epileptic Colonies, which contains much valuable information.

Tumours of the Cerebellum. By JOHN WYLLIE, M.D. Pp. 109. London: H. K. Lewis. 1908.

This little book begins with a very brief description of the structure and functions of the cerebellum, and then follows an account of the symptoms, character, diagnosis, prognosis and treatment of cerebellar tumours, based on an analysis of eighty recorded cases. It is intended for senior students, and may be said to contain a fairly complete statement of the known facts about growths in this situation.

Tics and their Treatment. By HENRY MEIGE and E. FERRIDEL, with a Preface by Professor BRISSAND. Translated and edited, with a critical appendix, by S. A. K. WILSON, M.A., M.D. Pp. xxi., 386. London: Sidney Appleton. 1907.

This is a most interesting book, and should be read by all who follow the progress of neurology.

We have in English no exact equivalent for the word tic: we may quote the author's definition. He defines tic as a co-ordinated purposive act, provoked in the first instance by some external cause or by an idea; repetition leads to its becoming habitual, and finally to its involuntary reproduction without cause and for no purpose. At the same time, as its form, intensity, and frequency are exaggerated, it thus assumes the characters of a convulsive movement, inopportune and excessive; its execution is often preceded by an irresistible impulse, its suppression associated with malaise. The effect of distraction or of volitional effort is to diminish its activity. In sleep it disappears. It occurs in predisposed individuals, who usually show other indications of mental instability.

Perusal of the book certainly leads us to accept the author's view that the tics are psychomotor disorders—belong, that is, to the psychoneuroses. A number of cases which support the

author's contention as to the pathogeny of the tics is given in the text. Certainly this view affords a more satisfactory basis for treatment, and the chapters on the mode of treatment by re-education—that is, by regularly graduated exercises of the muscles of the area affected by tic—deserves careful study in view of the successful results attained. We can cordially recommend this book as a valuable contribution to a difficult subject. It is well translated, and the translator has enhanced its value by adding M. Meige's latest definitions and views from his monograph *Le Tics*, and also by the addition of a full bibliography.

Department of Neurology, Harvard Medical School. Vol. III. Boston, Mass., U.S.A. 1908.—This volume comprises papers on neurological subjects, contributed by members of the staffs of the Massachusetts General Hospital, Boston City Hospital, Long Island Hospital and Neurological Laboratory, to various medical journals during the year 1907. These papers, which reach a high standard of excellence, and are of considerable neurological interest, are bound together and consecutively paged. They are thus in a form easily accessible for reference.

Injuries of Nerves, and their Treatment. By JAMES SHERREN, F.R.C.S. Pp. 310. London: Jas. Nisbet and Co. 1908.—This is an excellent book, well printed and illustrated, clearly written, not lengthy, yet containing a large amount of information given in a thoroughly practical manner, and much of it based on the author's own original work. Mr. Sherren is well known as the author of several valuable papers on the subject. His book shows originality of thought, and is obviously the outcome of a large clinical experience. It deals first with the symptoms in general produced by complete and incomplete division of a nerve, and the description of these is followed by an account of methods of examination, differential diagnosis and treatment. Plastic operations upon nerves are then carefully dealt with. The author gives a full description of the symptoms and diagnosis of injuries of each of the main nerves, and of the nerve-plexuses. There are a number of original illustrations, consisting chiefly of diagrams of areas of loss of sensation, and photographs of deformities produced by the paralysis resulting from various nerve lesions, which will be found very useful. We confidently recommend this book as embodying the most recent work on lesions of nerves, and as an excellent and practical guide to this important class of injuries.

Insanity: its Causes and Prevention. By CHARLES WILLIAMS. Pp. 92. London: The Ambrose Co., Ltd. 1908.—This essay contains about one hundred pages, the first half of which is chiefly an enumeration, with commentaries, of the official causes of

insanity, while the second and more important half deals with the steps to be taken to remove each particular cause. The two prevailing factors in the causation of insanity are heredity and intemperance in drink, and for the former the author lays down certain rules in regard to marriage of tainted persons. These rules contain nothing new from a medical point of view, but the author's object is to remove the ignorance of the general public, and in this spirit the whole book is written. On the subject of alcoholic intemperance the suggestions for prevention do not err on the side of leniency. They are (1) distribution wholesale of forcibly plain pamphlets; (2) intemperance to be a "just cause or impediment" for a clergyman to refuse to celebrate a marriage; (3) for persistence in drunken habits after marriage, that he or she should be made to keep sober by enforcement in all cases of the Inebriates Act. The book contains many quotations from well-known writers, and is thoroughly recommendable from a popular point of view.

Insanity and Allied Neuroses. By GEORGE H. SAVAGE, M.D., with the assistance of EDWIN GOODALL, M.D. New and Enlarged Edition. Pp. xiv., 624. London: Cassell & Company Limited. 1907.—This book has been thoroughly revised and brought up to date with the assistance of Dr. Goodall. Several of the articles—notably those on general paralysis of the insane, moral insanity and paranoia—have been largely rewritten, and contain much new matter. An important feature is the addition of many pathological illustrations, but the authors have wisely refrained from materially increasing the size of the volume (only to the extent of about fifty pages), so that it still remains within a handy compass. In its new form it is well adapted to the needs of the ordinary curriculum, and is also a useful practical guide for the busy practitioner.

BOOKS ON GYNÆCOLOGY.

A System of Gynæcology. By many writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., W. S. PLAYFAIR, M.D., and THOMAS WATTS EDEN, M.D. Pp. xx., 949. London: Macmillan and Co., Limited. 1906.

A review of such a work as this within the compass of a short paragraph is a practical impossibility, as it is impossible to give a really critical survey of each of the articles by recognised authorities which it contains. We can only point out the articles which will best repay perusal, and indicate some of the points in them which, perhaps, demand criticism or special notice.

From the historical point of view, one of the most interesting is that on the development of modern gynæcology by Dr. Montagu

Handfield-Jones, in which the gradual adjustment of pathological facts and clinical observations has resulted in progressive correction of errors, and consequent alterations in teaching which, from the point of view of the student, is extremely important. There can be no doubt that progress of this kind, based as it is on pathological facts, is of the very first importance.

Another article which should be read by every gynæcologist is that on Chorionepithelioma Malignum by T. W. Eden and J. H. Teacher. This may be looked upon as practically embodying the latest researches in connection with the disease.

It is impossible to give in detail all the information, much of which is either new or a collection of various older observations, which is here brought into line and compared. One point worth noticing is brought out by Teacher's series of cases, that this disease follows abortion or hydatidiform mole in approximately two-thirds of the cases collected by him. This indicates that the character of the pregnancy is by no means an unimportant factor in the production of the disease.

Another interesting point which Teacher has brought out is the fact that the metastases, which clinical observations prove to be present, frequently disappear after the removal of the primary growth by radical operation, and even occasionally after its partial or incomplete removal by curetting. This indicates extraordinary variations in the malignancy of the growth under various circumstances, and would strike us as being possibly capable of affording some kind of clue to the variations in malignancy which occur in the other better known forms of malignant disease. The article, however, should be read in its entirety to be fully appreciated.

The articles on "Disease of the Fallopian Tubes" by Mr. Alban Doran, "Pelvic Inflammation" by the late Dr. Cullingworth, "Pelvic Hæmatocele" by Dr. G. F. Blacker, and "Extra-Uterine Gestation" by Mr. Bland-Sutton will also repay careful perusal.

With reference to Dr. Blacker's article on "Hæmatocele," the following interesting observations are recorded, which we think all modern experience supports. For example, Fritsch has never seen a case of hæmatocele in which the presence of tubal pregnancy could be excluded with absolute certainty. Schauta has observed the condition only as the result of tubal abortion. Fehling states that its cause is tubal pregnancy in 90 to 95 per cent. of cases.

Cullingworth in 25 cases in which the source of bleeding could be verified found 24 to be due to tubal pregnancy, the 25th being due to rupture of a cyst of the broad ligament associated curiously enough with tubal pregnancy also. These figures give the almost unvaried experience of those who have by operation or autopsy verified the sources of hemorrhage in pelvic hæmatocele.

Blacker remarks that figures which tend to prove the opposite (*e.g.* those of Oberer, Weiss and Spengler) must be accepted with caution, as in the majority diagnosis was not confirmed by operation or autopsy. While hæmatoceles due to tubal pregnancy may be regarded as a rule, this, like other rules, is not one which is without exception. Exceptions are, however, far more infrequent than has been supposed. As regards treatment in this condition, Blacker evidently leans, and we think rightly so, to the more active modern treatment by operative methods.

The article by the late Dr. Cullingworth will tend, we think, to clear up and place on a more satisfactory basis the teaching as regards pelvic inflammation. He shows how, in spite of the observations of Aran and Bernutz, ideas entirely erroneous as to the relative frequency of inflammation of the cellular tissue and peritoneum of the pelvis have been promulgated for many years. His records of the relative frequency of these two affections can only be the result of either autopsy or operative treatment, and the tendency of all work in this direction has been to show the relative frequency of peritoneal as compared with cellulitic inflammation of the pelvis.

The article on "Antisepsis and Asepsis," by Dr. T. W. Eden, is also a valuable contribution to surgical knowledge. We, however, take exception to one statement of the author's, that is, as to the necessity or the reverse of high pressure sterilisation in the case of operations on private patients. While admitting that this is a necessity in hospital practice, he does not consider it to be of such prime importance in the operative treatment of patients in private practice of better social standing. Although there is no doubt that in the case of the latter success will result from methods the standard of which is not of the highest, we are quite unable to see why, if the methods advocated for hospital patients *do* give an increased margin of safety, these should not be made use of in the case of private patients, since in our experience there is no fundamental difficulty in carrying out precautions in their case deemed necessary in the case of patients of the former class.

The article by Professor Herbert Spencer on "Abdominal Hysterectomy" should also be read with care by those who are in the habit of performing this operation. We think that it would have been improved by a more detailed account of the methods of repair found most useful in cases in which the ureter has been injured. This accident, although not a frequent one, is probably one which few operators escape altogether; and in view of the importance of technical detail in dealing with its results, we think the account of this could not be too full or explicit.

Space will not allow of a more detailed account of the many interesting and valuable papers included in this work, which may

be looked upon as a compendium of the latest methods in gynæcological practice. We can only say that from the point of view of the specialist, the practitioner or the senior student, especially the candidate for the higher examinations, this work is invaluable.

The Technique of Vagino-Peritoneal Operations. By E. WERTHEIM and TH. MICHOLITSCH. Translated by CUTHBERT LOCKYER, M.D. Pp. 323. London: Macmillan and Co., Limited. 1907.—This work is of the greatest possible value to all those who are in the habit of operating on the pelvic organs by the vaginal route. It gives a whole series of extremely clear and excellent illustrations from photographs of the various steps in the operations of anterior and posterior colpotomy, which are delineated with great care and very clearly. They will be found most valuable by those who practise these operations, whether they are commencing or whether they have had experience of operating by this route. We feel no doubt that the range of usefulness of operations by this method is very much greater than has hitherto been supposed, but at the same time there are certain difficulties, mainly of manipulation, to be encountered which put a limit to the use of the vagina for operations on the pelvic organs. For example, the evacuation and removal of ovarian cysts by this route, in the absence of adhesions and by the method indicated, is a matter of no great difficulty; but, at the same time, the presence of adhesions would increase the difficulty very materially, and in our view render this method inferior to that by laparotomy. The same applies to a certain extent to the operation of myomectomy and removal of the uterus, where the latter is subject to fibroids. We have ourselves found that it is perfectly possible to perform such operations as myomectomy or the removal of the ovaries by this route, and consider that the plates and descriptions are of the greatest possible assistance. The full detailed account of Suchardt's operation or the paravaginal section is given, and this method also is one we can recommend as a very valuable adjuvant to the performance of operations by the vaginal route in cases in which this is preferable on account of the patient's general condition, and when at the same time room for manipulative procedures is insufficient. There can be no doubt that the vaginal route is one which is most valuable in cases of operation on elderly and feeble patients where it is wished to avoid shock, but at the same time it not infrequently happens that in such cases room for manipulative procedures is very limited. Suchardt's method will be found to give ample room, and the procedure to be adopted is clearly and simply described and illustrated. We congratulate the translator on his successful presentation of an extremely valuable and instructive work.

Rotunda Practical Midwifery. By E. HASTINGS TWEEDY, M.D. and G. T. WRENCH, M.D. Pp. xix., 464. London: Henry Frowde and Hodder and Stoughton. 1908.—This book shows up two points very clearly. First, that it is written by one accustomed to teach; and, secondly, by one accustomed to practise. It is therefore not only sound in principles, but also easy to understand, and essentially practical. The diagnosis of pregnancy, taken month by month, gives one at a glance the conditions to be looked for. The chapter on "Abortion and Miscarriage" is one which will be useful to general practitioners. On a subject such as this, which is really a question of practical details, one generally finds a book singularly deficient, and relies on what cases have come under observation before, or simply, and often soundly, on common sense. Here the book carries one to the bedside, and takes all possibilities as they arise. The necessity for having a thorough grasp of mechanisms in all conditions does not seem to have impressed the authors; their teaching on this head is scanty, involved, and the sketches not always convincing. The only other fault we would find is the very short space given to general diseases in pregnancy. For instance, heart disease is dismissed in eight lines. The book is one we would advise practitioners to buy.

Rotunda Midwifery for Nurses and Midwives. By G. T. WRENCH, M.D. Pp. xiv., 324. London: Henry Frowde and Hodder and Stroughton. 1908.—This little work is so much on the lines of the larger one—*Rotunda Practical Midwifery*—that we need say but little more about it. The style, teaching and diagrams are largely identical. The Appendix is useful, pointing out clearly the relation of the midwife to the State.

A Text-Book of Treatment. Edited by R. J. FERGUSON, M.D. Part I.—"Obstetrics and Gynecology." By JOHN CAMPBELL, M.A., M.D. Pp. xii., 279. London: Sidney Appleton. 1908.—We cannot think for whom these alphabetical books are written. If there is a demand for them, then we suppose it must serve as an excuse for the editor. We looked for "Mechanisms" under that name, under "Labour," under "Presentations," but failed to find them. Taking two others at random, there is nothing under "Antiseptics" or "Cæsarean" Section. The borrowed illustrations are very good.

BOOKS ON SURGERY.

Rational and Effective Treatment of Hip-disease. By P. BRACE BENNIE, M.A., M.D., B.S. (Melb.). Pp. viii., 108. London: Baillière, Tindall and Cox. 1907.

The writer of this book claims to have proved by experience that the only satisfactory methods of treating hip-disease are

those of Thomas, and he here describes in great detail those methods, together with certain improvements of them which he has himself introduced. We agree with him that the principles and methods of treatment described by H. O. Thomas are not so well understood by the profession as they should be. Too often the making, fitting and adapting of a Thomas's hip-splint is left to the instrument maker, and the adaptation is imperfect, either from the beginning or later when, with the progress of recovery, a re-adaptation becomes necessary.

It is obvious from the text that Mr. Bennie is a master in the art of applying Thomas's hip-splints and of the principles which underlie their use, and that he has obtained this mastery as a result of prolonged and careful study and practice. It is clear, too, that good results can only be obtained with these splints if they are made and applied with great care. All the details requiring great care are well explained in this little book, and for this reason it cannot fail to be of great use to any surgeons who have hitherto believed that the fitting of the splint could well be left to the instrument maker. We may, however, express the hope that a way will be found of fitting these splints in the best manner possible without resorting to trigonometrical formulæ.

Other forms of splint treatment in addition to that of Thomas are briefly considered, and also operative and constitutional treatment. The observations upon the association of hip-disease with congenital syphilis are specially interesting and suggestive.

The author has done a very real service for the future sufferers from hip-disease, and for the practitioners who treat them, by describing with such fulness and detail his methods of treatment, and showing the excellent results which are obtainable from them.

Manual of Surgery. By ALEXIS THOMSON, and ALEXANDER MILES. Edinburgh: Young J. Pentland. 1907. Vol. II. Second Edition. Pp. xiv., 816.—It is some three years since we reviewed the first edition of this book, the second volume of the Manual. The second edition has been enlarged by some eighty pages, and the illustrations increased by nearly fifty. The first addition we notice is the method of lumbar puncture with its various indications. Much is added with regard to the treatment of scoliosis by exercises. Nearly all the chapters have been enlarged, some of them renewed, but the number kept as before. The book has been brought well up to date, and is a most useful student's text-book.

On Diseases of the Rectum and Anus. Third Edition. Pp. xii., 588. **Cancer of the Rectum.** Fifth Edition. Pp. x., 255. By HARRISON CRIPPS, F.R.C.S. London: J. and A. Churchill. 1907.—These may be taken together in review, and a table of

380 cases of cancer of the rectum is common to both books, a subject which occupies one-fourth of the larger volume. The special studies of the author, and the period they have covered, serve to perpetuate the authority of the works, and the many beautiful drawings by the author of microscopical sections enhance their value. It can scarcely be said that modern micro-photographic reproductions are so clear and instructive as these original drawings, which bring out special detail more impressively. From one of such experience in rectal surgery we may learn much from well-written monographs; and concerning cancer of the rectum, he gives a mortality of 5 per cent. from radical operation, three out of every eight cases remained well over three years, and one patient was alive and well without recurrence for twenty-two years after excision. The text everywhere conveys the impression of being the product of years of hard work and matured experience, and combined with a pleasant literary style—a quality which seems to be rare in modern medical writings—it may be regarded as one of the most important literary achievements on regional surgery. We heartily commend the larger work to the notice of operating surgeons and practitioners.

Surgery of the Rectum. By FRED. C. WALLIS, M.D., F.R.C.S. Pp. vii., 168. London: Baillière, Tindall and Cox. 1907.—This is a very good little manual, fairly well illustrated, covering the general grounds of the surgery of the rectum, not intended for, nor adapted to, the requirements of operating surgeons. He emphasises the importance of abrasions and ulcerations of the proctodeum in the causation of abscesses and fistulæ, as well as of that troublesome affection, pruritus ani. There is a good diagram of such abscesses, the precursors of fistulæ, on page 23. Moreover, he regards the commoner strictures of the rectum as due to infection from ulceration, and not to constitutional disease. His statement that hemorrhoids are due to pathological changes in the veins requires some modification in the light of recent pathology. He gives preference to the operation of excision for piles, and states that the danger of stricture does not exist after it, provided proper after-treatment is carried out. This hardly accords with what we have seen resulting after the operation by well-known surgeons. He refers to the possibility of ulcerations of the rectum being the cause of recurrent synovitis of the larger joints. We are surprised to find that in the performance of colotomy he still sutures the peritoneum to the skin; and are surprised also that, in common with some other surgeons, he finds that prolapse of the colon is not an uncommon occurrence. The former practice was ably contested by Greig Smith many years ago, and the latter result is rarely seen after operations done in this neighbourhood. It might be well if some surgeons seriously considered whether there are not means of operation in common

use by which such an undesirable complication can be avoided. We have even known an examiner at the Embankment express surprise that a candidate was not aware that prolapse was a frequent complication. The book can be well recommended, it is interesting reading, it is not so deep nor so statistical as to be a soporific.

Operations of General Practice. By EDRED M. CORNER, M.C., M.B. (Cantab.), and H. IRVING PINCHES, M.B., B.C. (Cantab.). London: Henry Frowde and Hodder & Stroughton. 1907.—This is rather heavy as a manual, but is well printed, and clearly illustrated by line drawings and borrowed blocks. It is an attempt to meet a deficiency in professional education by the verbal description of classical and modern procedures in minor surgery. This is a worthy aim, but we think it is an impossible one, for even the details of minor surgery can only be properly appreciated by practical tuition in a hospital; and in the absence of such tuition we do not think a practitioner would be justified in amputating a breast or removing an exostosis of the femur from a perusal of the descriptions given, especially considering the warning given to the practitioner on page 276 not to scratch his unsterilised head or nose when assisting at an operation. There are many good points in the book, but the general practitioner will be wise to avoid attempting some of the operations described, unless he has had practical training and experience therein; and, amongst other things, we would advise him *not* to open the maxillary antrum through the canine fossa, dilate the communication with the nose by means of artery forceps passed into the nostril through the antrum, and make the patient dilate this opening night and morning with the terminal phalanx of his little finger (page 54).

Surgical Emergencies. By PERCY SARGENT, M.A., M.B., B.C. Pp. 256. London: Henry Frowde and Hodder & Stoughton. 1907.—This book, one of the Oxford Medical Series, is a handy little volume, but devoid of illustrations, and quite elementary in character, though a safe guide to many minor surgical emergencies. As stated in the preface, it reflects the teaching at St. Thomas's Hospital, and consequently we find the author giving preference to an abdominal incision by splitting the fibres of the right rectus muscle, though, speaking from experience, we do not think that this incision always has the advantages claimed for it. He speaks rather disparagingly of the treatment of compound fractures by antiseptics, and of excision of the gut for gangrenous hernia. His remarks on hemorrhage are judicious, but he does not mention the insertion of two fingers and the compression of the lingual against the cornu of the hyoid in hemorrhage from the tongue, nor the opening of a retropharyngeal

abscess at the neck instead of through the mouth as advocated. However, the book is readable, generally accurate, and will prove of service to those for whom it is intended. There are a few slips, and a more careful editing and more copious index may be advantageous in any future edition. We note that he leaves out the diphthong — fasciae, haemorrhage, faecal, anaesthetic occur in the book. It is strange that in modern medical writings there should be various ways of spelling such words.

The Diagnosis and Treatment of Intussusception. By CHARLES P. B. CLUBBE. Pp. viii., 92. Edinburgh and London: Young J. Pentland. 1907.—Mr. Clubbe has had an exceptionally large experience of intussusception, having had in thirteen years 144 cases under his care. He advocates a preliminary irrigation in all cases when the patient is anæsthetised ready for laparotomy, because even if the intussusception is of long standing, and a curative result is not to be expected, yet the irrigation reduces the invagination to a certain degree, and does so " in the best and gentlest possible way," and diminishes the need for manipulation of the intestine if laparotomy has to be performed. This method of treatment was carried out in 138 of the author's cases. In 14 of these irrigation alone was completely successful in effecting reduction; in the remaining 124 cases laparotomy was performed after irrigation. In three cases the abdominal exploration revealed that complete reduction had been effected by the irrigation. In one case only was irrigation possibly harmful, because it led to postponement of the operation for twenty-four hours, and the case ended fatally. In eight cases in which resection of bowel was performed one patient only survived, an infant eleven months of age. It is interesting to note that no less than 57 per cent. of the author's cases submitted to operation were examples of double intussusception. These double varieties included 42 cases of the cæco-ileocæcal type, in which the invagination begins at the caput cæci; 22 of the enteric-ileocæcal type, in which the invagination starts in the ileum near the ileocæcal valve; and 7 of the ileocolic-ileocæcal type, in which the intussuscepted ileum passes through the valve in the colon. We have read this short monograph with much pleasure and profit. It is full of sound practical hints and suggestive reasoning.

Modern Methods of Diagnosis in Urinary Surgery. By EDWARD DEANESLY, M.D., B.Sc. Lond. Pp. iii., 97. London: H. K. Lewis. 1907.—The adjective " modern " in the title of this little book has special reference, we judge, to the description and advocacy of the use of cystoscopes and segregators for diagnosis in affections of the urinary organs. The description of the methods of using these instruments, and also that of the more ordinary methods of diagnosis, are succinct and methodical. In some places more or less original and suggestive opinions, the outcome

of the writer's experience, find expression. Students and surgeons of limited experience, or deficient in scientific method, can be cordially recommended to appropriate the methodical system of investigation advocated by the author, and even those who are methodical and have "modern" experience will find food for reflection in the book. The chapter on the separate collection of urine from each kidney is particularly good, and in it the limitations of the segregator receive consideration, as well as its powers of achievement. Many valuable methods of diagnosis in urinary disease are not described; but the book is a short essay on diagnosis, not a treatise.

The Johns Hopkins Hospital Reports: Studies in Urological Surgery, Vol. XIII.; **Studies on Hypertrophy and Cancer of the Prostrate**, Vol. XIV. Baltimore: The Johns Hopkins Press. 1906.—The thirteenth volume of these studies has been written by Drs. H. H. Young, A. A. Fowler, J. W. Churchman, J. T. Geraghty, L. C. Lehr, H. R. Stevens, S. H. Watts and F. H. Baetjer. The fourteenth volume is entirely the work of Dr. Hugh H. Young. Both volumes contain more than 600 closely-printed pages. Both are monuments of ability and industry, and demand the most careful consideration from all urologists. Dr. Young's results from perineal prostatectomy, with a total mortality of 7 in 238 cases and a series of 112 cases without a death, are the best yet obtained from any form of prostatectomy, and that fact alone shows how necessary it is to study his methods and researches. Among the subjects considered in these volumes are the seven-glass test, urethral diverticula, treatment of stricture of the urethra, operative treatment of vesical diverticula, chronic prostatitis, &c. We will not attempt criticism, but simply draw the attention of our readers to these important contributions to urological science.

First Aid to the Injured. By Dr. FRIEDRICH ESMARCH. Translated by H.R.H. Princess CHRISTIAN. Seventh Edition. Pp. xv., 138. London: Smith, Elder & Co. 1907.—This valuable little handbook continues to hold the field in face of many more pretentious rivals, and still reflects credit on the German savant who first ventured upon the unpopular experiment of teaching ambulance work to the multitude, and on the lady who, apart from translating the mere text, lent such influence as she possessed to fostering his schemes (not always without opposition, it must be confessed) in England. And now this book boasts of translations into twenty-seven other living languages, and has reached in all twenty-one editions since its first appearance in 1882. The author's name is a household word in English surgery, and we must confess that for precision, simplicity, and omission of what is unnecessary, even in England we unhesitatingly admit his pre-eminence. We like it the better, too, for the simple forceful language of the translation.

"First Aid" to the Injured and Sick. By F. J. WARWICK, M.B., and A. C. TUNSTALL, M.D. Fifth Edition. Pp. xiii., 252. Bristol: John Wright & Co. 1908.—When a book reaches its fifth edition there should be little room left for criticism, success being a fair test of value. The Order of St. John of Jerusalem, through its Ambulance Department, having now granted nearly a million certificates, is mainly responsible for the popularisation of first aid in this country, and with its fine organisation of medical and civilian helpers has largely overcome any tendency to the development of first-aiders into amateur practitioners of surgery, who might force their opinion into conflict with qualified medical men. This important position has been effected chiefly by the insistence of the Order that none of its certificate-holders shall dress an injury a second time, and also by arranging its teaching to be both simple and practical. We therefore consider that 68 pages of small print being devoted to anatomy and physiology to be out of place even in an *advanced* first aid manual, which this one is called. The chapter on the use of the triangular bandage for wounds (12 pages), and the same number for poisons, is at least a tax on the memory of the average person, and in the latter case an expansion of general rules for treatment would be much more useful. Again, practice with the roller bandage should be confined to the redressing of injuries by nurses, the skill required for its use being far more than a sound knowledge of first aid work with the triangular bandage demands. Without being captious, is the use of styptics advisable for first aid? and is "direct pressure by means of the fingers to the bleeding-point until the bleeding has quite stopped" desirable treatment for arterial hemorrhage? Again, we must dispute the wisdom of entertaining the risk of the use of the Esmarch's tube, or any other elastic or mechanical apparatus, for control of hemorrhage by a first-aider. We would point out that Schäfer does not suggest a pad under the patient's chest, or that his forehead should rest on his arm, in his method of artificial respiration; also the very out-of-date and dangerous method of short-circuiting an electric current by means of an iron rod. Drs. Warwick and Tunstall have made a brave attempt to comprise all that can be known in first aid within the pages of their book, but a smaller manual of general principles, couched in simple language which could easily be committed to memory, would be far more valuable to the man who is a practical and not a mere theoretical first-aider, and whose duty it is to confine himself within the limits of his art, and would not tend to fill him with knowledge which, however valuable, might confuse him in dealing with a serious emergency.

Aids to Surgery. By JOSEPH CUNNING, M.B., B.S. Second Edition. Pp. vi., 404. London: Baillière, Tindall & Cox. 1908.—This is a "cram" book, and as it comprises some 400

pages of small print, is somewhat voluminous as such. It might be of some service to men preparing for an examination, provided they have an intimate knowledge of standard works, so as to discard errors and evade false impressions. Apart from such use, we cannot recommend the book as a suitable one for students, although the author shows evidence in the text of considerable acquaintance with recent literature, and the work is more up to date than many of its class.

Hernia: its Cause and Treatment. By R. W. MURRAY, F.R.C.S. Pp. vi., 99. London: J. & A. Churchill. 1908.—In this small work the author advocates the "saccular theory" of causation of hernia as originally emphasised by Mr. Hamilton Russell. With this view, the desirability of getting rid of the sac is of the utmost importance, and operative methods are preferred in almost every case. The more complicated operations are rejected, and the procedure favoured is much the same as that advocated by the late Sir William Banks. There is not much that is new in the book, which has been mainly written to support the views to which reference has been made, and this results in a tendency to treat most cases in a stereotyped plan of operation, to the practical exclusion of treatment by means of trusses.

BOOK ON ANATOMY.

Anatomical Terminology. By LEWELLYS F. BARKER, M.D. Pp. ix., 103. London: J. & A. Churchill. 1907.—The desirability of a uniform nomenclature in scientific matters is so obvious, that it should need no arguments to emphasise it. In the department of anatomy this ought now to be secured by the adoption of the terminology accepted at Basle by the German Anatomical Society. Its advantages are overwhelming. The terms are in Latin, thus rendering them intelligible all the world over, and synonyms are eliminated. A concession to terms associated with individuals is made by adding, in certain instances, the name in brackets. The Latin portion of the work under notice is the outcome of a Commission appointed by the Society in 1889, which consisted of Professors von Kölliker, O. Hertwig, His, Kollmann, Merkel, Schwalbe, Toldt, Waldeyer, and v. Bardeleben, with Professor W. Krause as editor-in-chief. The English equivalents have been prepared by Dr. Barker, with the help of Dr. Benson A. Cohoe, both members of the staff of Johns Hopkins Hospital. Ultra-conservatives will probably be able to offer many objections to the proposals. These seem to have been anticipated by the Commission, whose conclusions, and the reasons for them, are admirably set forth in an extremely lucid introduction which Dr. Barker has written for this volume. This introduction is full of interest, and well worth consideration

even by those who are not anatomical specialists. Dr. Barker states that the new edition of Morris's *Anatomy* adopts the nomenclature. In course of time it ought to meet with universal acceptance.

Les venins des Animaux Venimeuse et la Sérothérapie Anti-venimeuse. By A. CALMETTE. Paris: Masson. 1907.—In this volume Calmette has gathered together his publications and observations of the last fifteen years. It forms an admirable record of patient work. Those interested in the subject will find it of the utmost value for reference. After detailing the morphology of the snakes of Europe, Asia, Africa, Australia and America, the author discusses the physiological actions of the several venoms, and the value of vaccination and anti-toxin treatment. The poisons of certain fishes, batrachians, saurians, and mammals are then considered. We must express our appreciation of the numerous illustrations. These alone make the book worth its money.

The Bacteriological Examination of Disinfectants. By WILLIAM PARTRIDGE, F.I.C. Pp. 66. London: The Sanitary Publishing Co. 1907.—This brochure, which is introduced by a preface by Major C. E. P. Fowler, will be welcomed by those who have to deal with matters of practical sanitation. The difficult problems met with in determining the values of the various disinfectants are fully discussed, and the technique of the methods given in detail. There is a special chapter on the influence of organic matter on disinfectants.

The Reduction of Cancer. By the Hon. ROLLO RUSSELL. Pp. 62. London: Longmans, Green & Co. 1907.—This strange little sermon appearing in scientific guise, although pleasantly enough written and insisting on a sound mode of living, has little or no real claim to its title or to a place in scientific literature. The burden of its teaching may be gathered perhaps from a single sentence: "All ingesta not really nutritious, and containing a strong poison which pleasantly excites, are as a matter of fact, when habitually and largely consumed, not only luxuries, but destructive luxuries." From this text, by a careful compilation of statistical extracts, almost any proposition might be bolstered up, and the remainder of the book goes to show that "in a long list of countries *all* the small consumers of flesh, tea, coffee, beer and tobacco have a small cancer rate; *all* the large consumers have a high rate." But the author's arguments are very loosely strung together. Many authorities are laid under contribution, general non-committal statements are strained into direct proofs; dietetic precautions in cases of aneurysm are represented as "having a bearing on liability to cancer" which "is not remote," until the brain reels under the battery of eminent names, sensational figures, and hasty generalisation into a sort of submissive

condition in which one would readily admit that Tariff Reform is the cause of tuberculous meningitis, and a Radical Government responsible for sporadic cretinism. Still, cancer apart, there is much good advice in Mr. Russell's book, and if only its title attracts attention to his teaching (which the Greek philosopher could sum up in two words, Μηδὲν ἄγαν), there will be no reason to complain of the unscientific reasoning in its pages.

The Opsonic Method of Treatment. By R. W. ALLEN, M.B., B.S. (Lond.). Pp. ix., 138. London: H. K. Lewis. 1907.—This small work gives us a brief but clear *résumé* of the chief facts of the opsonic method. It cannot fail to be of interest, coming as it does at a time when many medical men are still sceptical of the value of the opsonic index, more especially in its relation to the diagnosis of the various tuberculous infections. The chapter on technique is excellent, but though much stress is laid on the necessity for good technique, very little is said about the errors which appear to us to be inseparable from the estimation of the opsonic index, even in the hands of the most capable and conscientious workers. The writer deals briefly with the various infections amenable to serum therapy, and indicates the chief points in the preparation and administration of suitable vaccines. Some of the sections appear to us to be too short, notably that dealing with infections due to the Bacillus coli communis. On the whole, the book is compact and interesting, if a trifle optimistic.

Skin Affections in Childhood. By H. G. ADAMSON, M.D. Pp. xvi., 287. London: Henry Frowde and Hodder & Stoughton. 1907.—A welcome attempt is made in this handbook to depart from the trammels of a vile nomenclature which has in every direction rendered dermatology a closed path to students, whether qualified or unqualified, and there can be no doubt that the causal classification of skin diseases places the subject at once on a fresh footing, where the scientific practitioner can fairly hold his own with the charlatan who once roamed fancy free over the integuments of suffering mankind. Dr. Adamson classifies the skin affections of children under: Affections of congenital origin; eruptions due to local physical causes; eruptions due to animal parasites; eruptions due to vegetable parasites; eruptions due to local microbic infection; affections probably of local microbic origin; tuberculosis of the skin; eruptions of toxic origin, or the result of general microbic infection; affections of nervous origin; unclassified affections. And it is surprising how small the last class comes to be, including, as it does, eczema, psoriasis, lichen, pityriasis rosea, prurigo of Hebra, urticaria pigmentosa, and alopecia, illustrating, if proof were needed, how far the science of dermatology has advanced since the "dermatographic survey" to which Willan subjected skin diseases. The result is a short, accurate description of many troublesome affections, whose

pathology, where understood, is excellently set out, with rational hints as to treatment, and a total absence of the imaginative causative ingenuity with which outraged nature has been so abundantly credited in many text-books of dermatology in the past. Dr. Adamson is a careful observer, not only of children's diseases, but of children, and his book is worth reading.

A Guide to the Administration of Ethyl Chloride. By G. A. H. BARTON, M.D. Second edition. Pp. 54. London: H. K. Lewis. 1907.—In the second edition of his monograph on the administration of ethyl chloride Dr. Barton has introduced some useful additions to the information contained in the first edition. The dosage is very practically given, and a suggestion is made of a method for regulating the period of anæsthesia by the withdrawal of the face piece at definite and clearly indicated stages of reflex phenomena. This book will probably be the means of preventing some accidents with ethyl chloride, and is therefore a useful work.

A Text-Book of Mental and Sick Nursing. By ROBERT JONES. M.D., B.S. Pp. xix., 222. London: The Scientific Press Limited. 1907.—The book opens with a plea for a combination of medical and surgical together with mental training, but it does not suggest how such medical and surgical education is to be acquired by the male nurse, a difficulty the solution of which is not very obvious. The opening chapters give a short account of the physiology of the various organs—the brain, the circulatory and respiratory system, the kidneys and the organs of digestion. The section relating to the mind is written in a very clear style, and explains step by step the aberrations from the normal of a deranged mind, and by describing the connection which exists between the impressions received from without, and our thoughts and actions, it illustrates very simply the terms "hallucination," "illusion" and "delusion;" it draws, in fact, a neat picture of the difference between sanity on the one hand and insanity on the other. Chapters X. to XIII. deal with the duties of a mental nurse, and are calculated to embue those who read them with an increased sense of responsibility, and to impress upon the nurse's mind the importance of noticing and reporting to the medical man in charge all the minute variations in the mental aspect of the case. A good account is also given of the necessary precautions to be taken with regard to the patient's surroundings. The latter part of the book is devoted to a description of the technique of nursing, especially as applied to the different phases of mental diseases. A difficult task has been tackled in a masterly manner, and a long-felt want has been met by the clever way in which Dr. R. Jones has brought theory into line with practice by this carefully-written manual, which contains many suggestions for those responsible for the training of mental nurses, as well as a fund of information for the latter.

Editorial Notes.

Gastric Surgery.

The two papers on "Surgical aid in chronic ulcer of the stomach," the one by Dr. J. A. Nixon (page 217) and the other by Mr. C. A. Morton (page 207), recall the fact that gastric surgery is of only recent date, and that it was in this *Journal* that Mr. Nelson C. Dobson was one of the first surgeons to suggest the desirability of surgical interference in perforating ulcer of the stomach. A reference to his paper (vol. i. p. 198) will show that its author was in advance of his time when he expressed "his hope and belief that before long this disorder, which is so commonly fatal, will be robbed of some of its perils by the timely and well-directed efforts of the surgeon." The results which we now publish are such as must greatly exceed the expectations of the most sanguine in 1883.

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Royal Army Medical Corps.

It is very gratifying to those who have done the work to find that their efforts are being recognised and gratefully acknowledged. With reference to the patriotism of the medical profession, the Director-General of the Army Medical Service, in his Report dated July 18th, makes the following statement :—

> "I cannot attempt here to describe the tasks which have been placed on the shoulders of the members of the medical profession. All the efforts connected with the organisation of a medical service of the Territorial Force have been made by men who are leading busy lives while undertaking these additional and heavy burdens. It is on principals and professors of universities, lecturers in medical schools, physicians and surgeons of great civil hospitals, and more especially on the general practitioners throughout the country, that the

whole burden of training to equip themselves for the work now falls, and for this purpose they are devoting both time and money. I feel it to be my duty, therefore, to draw your special attention to the aid which I have received from these most patriotic men, the whole body of the medical profession."

Locally we know that this comment has been well deserved, and that the following quotation from the Bristol *Times and Mirror* (August 5th), with reference to our own Division, gives such well-deserved commendation :—

"The new Bristol Royal Army Medical Corps, under the command of Lieut.-Colonel Prichard, are bearing themselves right worthily. They are a credit to the Territorial Army."

* * * * *

British Medical Association.

THOUGH no great discovery or startling announcement marked the Sheffield meeting of the British Medical Association, much valuable work was brought forward. As to the representative meeting, the new constitution is working well. The wearisome discussions on the Charter are apparently at an end, for the meeting finally decided by a practically unanimous vote that immediate application should be made for it. A determined effort had been quietly made during the winter on the initiative of the late President, Dr. Davy, to bring into harmony the divergent opinions of last year, and after a detailed re-examination of the proposed Charter very few alterations were made.

Nothing was more remarkable than the thorough and temperate way in which great practical questions were thrashed out, such, for instance, as the Principles of Hospital Management and the Ethics of Consultation. A hearing was given to every objector, but the meeting quickly made up its mind as to what was just and practical, or what was unripe for decision at the present time.

One new departure was agreed to in the establishment of a department at the annual meetings for the discussion of Sociology,

at which lay persons might speak as well as medical men. An instance of the value of the participation of laymen in certain debates was seen when the Lord Mayor and Sir John Bingham spoke on the smoke abatement question, and explained the position of the manufacturer.

The meeting will long be remembered for the proverbial Yorkshire hospitality which was shown to the visitors. The beautiful excursions in the neighbourhood, the great manufactories on view in the city, and the entertainments provided by the inhabitants, will not easily be forgotten. A large number of the representatives were invited to Buxton from Saturday to Monday, and well entertained at the chief hotels. There, too, the weather was brilliant. The splendidly-equipped baths and the hospital were inspected, and the waters tasted. Quick trains brought back the fortunate members to Sheffield after a restful experience of the delights of Buxton. The cause of the therapeutic activity of the springs is by no means clear. They contain, principally, carbonate of lime and common salt, with some free nitrogen and CO_2. The temperature is only 80°, yet the waters have long been and are resorted to by crowds of sufferers, with apparently great real benefit, while our own Hotwells, with water of a somewhat similar type, are entirely disused.

There was a large attendance of eminent foreigners, and the display of various academic robes, both when honorary degrees were conferred and upon other occasions, was remarkable. Perhaps the greatest enthusiasm was that called forth by the appearance of Colonel Bruce, the discoverer of the cause of Malta Fever, who received his honours amid general applause, and whose address was followed with close attention.

In the Public Health sections several local matters of great interest cropped up. A scheme for supplying dried milk to infants during the diarrhœa season gave the curious result that though it did not altogether always prevent epidemic diarrhœa, it produced a remarkable gain in weight, and wiped out chronic dyspepsia among the infants. Sheffield, too, was specially proud of the results of her smoke abatement, and claims more

sunshine than any manufacturing town in England. We had, indeed, almost too much during our week. The boiler chimneys ten years ago emitted dark smoke for 15 to 50 minutes per hour; now they are cut down to about 2 minutes for each boiler, without loss to the manufacturer. This depends largely on improved stoking. There are, indeed, some processes where it is not yet possible to abolish smoke in spite of the efforts which are being made. The remarkable fact remains that very little is done in private houses to abate smoke or prevent the fumes of gas fires circulating in the house, while such great results have been obtained in manufactories. In Liverpool and St. Helens I saw the crusade against smoke going on. Even the great liners on the Mersey are compelled to reduce their smoke, and our steamer promptly stopped its black cloud when it reached a certain point in the river. Edmund Owen, in his lecture on dust and disease, also referred to the question of smoke as an irritant to the lungs, increasing their susceptibility to disease.

The question of the notification of births led to considerable controversy in the section between medical men. One cannot help feeling that the difficulty might have been avoided if the Act had simply ordered registration to take place in the first week after birth, and that a copy of the register should be given to the medical officer of health at once.

The beautiful buildings of the University afforded an excellent site for the lectures and discussions. Unfortunately, the acoustic properties of the Firth Hall did not seem to be satisfactory. The speeches and the lecture of the president were inaudible to a large number, and the hall devoted to the representative meeting was most trying for the same reason. Lanterns and the kinematograph were utilised in the sections. The pictures of Dr. Wilfrid Harris illustrating the tremors and gait in nervous diseases were excellent, and it is to be wished that a similar set could be found in every medical school for the instruction of students. Another lantern demonstration which excited great interest was that by Professor Neisser, the discoverer of the gonococcus, who has devoted his private fortune to research, and has recently returned from a three years' investigation of

syphilis in Java, where, with the aid of the German Government, inoculation tests were carried out on the larger apes. Neisser is convinced that the spirochæta pallida is the source of the disease, though a complete demonstration is still unattained.

In the section on Medicine a very interesting paper was that of J. H. Pratt, of Baltimore, describing a method of home treatment of tuberculosis. The patients were formed into a society or class, which met periodically. Both in class and at home they were taught how to manage themselves. Tents were put up for them in their gardens or on their roofs, and the advantage of this steady drill and care was shown in the very large percentage of cures effected. Nathan Raw also gave an account of his work with bovine tuberculin. He claims to protect children from infection by the use of a serum obtained from tuberculous cattle. For the cure of pulmonary tuberculosis he employs bovine tuberculin, reserving Koch's tuberculin for surgical cases only.

As regards the Section of Surgery, the three days were all so full that it is difficult to summarise their proceedings. On Wednesday Sir Watson Cheyne and Mr. Harold Styles introduced a discussion on the diagnosis and treatment of cancer of the breast and were followed by many speakers. There was but little difference of opinion expressed on important facts, but the advisability of removing supra-clavicular glands, the necessity for the sacrifice of the pectoralis minor, and the ultimate prognosis after operation were the points which gave rise to the most interesting discussion. Professor Murphy, of Chicago, was very emphatic as to the absolute unjustifiability of employing chloroform as an anæsthetic.

Thursday was devoted to a most instructive series of papers on the indications for nephrotomy and nephrectomy, introduced by Dr. Newman of Glasgow. The possibility of saving suppurating kidneys by drainage, the diagnosis of early tubercle of the kidney, and, above all, the importance of the cystoscope were the chief points of interest.

The third day was almost overcrowded by papers on diverse subjects, including one by Professor Lucas-Championiére on

" Mobilisation of Fractures," by Professor Tillmans on " Cerebral Puncture," by Professor Willens on " Tarsectomy for Talipes." The only regret one felt was that the time was too short for adequate questions and discussions.

The Pathological Museum contained a very remarkable collection of specimens illustrating the surgery of the kidney and extra-uterine gestation, besides many other subjects of medical interest.

Notes on Preparations for the Sick.

Mostelle—Pure Juice of the Grape.—THE GRAPE JUICE CO., LTD., London and Tarragona.—This appears to be a very successful attempt to preserve ripe grape juice in its natural state without fermentation or the addition of foreign substances. The method of preservation is simply that of Pastuerisation: accordingly the wine should be consumed within four or five days after air has been admitted by the withdrawal of the cork. There are three varieties, Red, White and Golden Muscat; either of these when diluted with aerated water makes a refreshing, palatable and wholesome beverage. The wine is grown in the Province of Catalonia, in the north-eastern part of Spain. It is of a rich quality, containing some 25 per cent. of grape sugar. Accordingly it has an appreciable food value, may be given to children, and to all patients when an antiscorbutic fruit diet is desirable and fresh fruit may be unattainable or undesirable.

Sterilla Soap: an improved antiseptic liquid soap for surgical purposes.—HAROLD E. MATTHEWS, Clifton.—Ether soaps have long been in use, but the odour of the ether is sometimes undesirable. This sterilla solution is practically odourless, and is most efficient for all purposes when soap is required. It mixes readily, does not corrode instruments, is useful for filming mirrors, and at the same time it sterilises them, as it is more potent than carbolic acid as a germicide. It must prove a safeguard against infection of skin and hair, and is an excellent protection against the traumatisms and inoculation of insects. It is the most satisfactory liquid soap which has come to our notice, both as regards personal hygiene and as a cleansing agent for surgical purposes.

Staphylococcus Vaccine.—PARKE, DAVIS & Co., London—This is one of a series of bacterial vaccines now being produced in the Inoculation Department of St. Mary's Hospital, London, under the direction of Sir Almroth E. Wright. The flask contains one c.c., representing one hundred million of various strains of staphylococci applicable to the treatment of ordinary furunculosis, suppurating acne, staphylococci sycosis and other forms of staphylococcus infection. Other vaccines are the streptococcus from cases of erysipelas, the gonococcus, the tubercle, and the typhoid vaccine. Messrs. Parke, Davis & Co. have been appointed sole agents for the sale of these vaccines. Full instructions for use are given with each flask.

"Vaporole" Aromatic Ammonia.—BURROUGHS, WELLCOME & Co., London.—A convenient means of instantly obtaining ammonia for inhalation in cases of fainting. These "Vaporoles" contain a solution of ammonia gas with aromatics ready for immediate use in emergency. They are more reliable than ordinary smelling-salts, which rapidly deteriorate. Each "Vaporole" contains a convenient quantity of solution in a capsule surrounded by absorbent material, the whole being enclosed in a covering of silk. When required the capsule is easily fractured by pressure between the fingers, and the vapour may be inhaled in the ordinary way. They are very efficient.

Palatinoid Triple Valerianates.—OPPENHEIMER, SON & Co., London.—This combination of valerian with zinc, quinine and iron should be most useful for the treatment of neurotic and other conditions (mostly in women) when the valerian preparations are indicated. They are odourless and unobjectionable. If valerian be necessary, surely such a preparation as this must be the most effective form of it, as it has none of the disagreeable qualities of the ordinary preparations.

Ceredin Tablets: the Fat of Yeast.—Bœhringer and Sœhne, Mannheim.—Each tablet contains ½ grain of ceredin and 3½ grains of sugar of milk. These tablets have obtained some reputation in the treatment of furunculi, suppurating acne, and such conditions, but in competition with the staphylococcus vaccine it seems doubtful if their reputation will be maintained. We have tried them in the carbuncles of diabetes, but with no very obvious result.

Coryfin: a new ethylglycollic menthol ester, designed to replace menthol as having a more prolonged action; an external anodyne.—THE BAYER CO., LTD., London.—1. In nervous head-

aches coryfin should be lightly rubbed on the forehead, or it may be applied with a brush, which generally produces the desired result within ten to fifteen minutes. 2. (*a*) In common colds, intense coryza may be treated by dabbing the mucous membrane of the nose with a cotton pad or camel-hair brush moistened with coryfin. It is a good plan to leave a small plug moistened with coryfin in the lower part of the nostril and to endeavour to breathe through the nose. During long continued marches on the dusty road occasional moistening of the mucous membrane of the nose with coryfin relieves the respirations and prevents dryness in the nose and throat and its attendant discomfort. (*b*) In hoarseness or catarrhal irritation of the throat gargle with tepid water containing a few drops of coryfin, or allow a piece of sugar with three or four drops of coryfin to dissolve in the mouth.

Bornyval.—J. D. RIEDEL CO., London, E.C.—These elegant and inodorous gelatine pearls contain four grains of the active principals of valerian root. They should be of much value in cases of the various neuroses in which valerian is indicated, and in which this drug is becoming increasingly in demand.

Gonosan.—These capsules contain the active principals of kava-kava dissolved in pure East India sandal-wood oil. They are proving themselves highly useful in rapidly converting the purulent discharge into a mucus one, and so allaying the severe symptoms of the first stage.

The Library of the Bristol Medico-Chirurgical Society.

The following donation has been received since the publication of the List in June:

August 31st, 1908.

R. Shingleton Smith, M.D. (1) .. .. .. 2 volumes.

SIXTY-NINTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Catalogue of Lewis's Circulating Library .. .. .. New Ed. 1908

Compton, A. T. .. *Essentials of Surgery* 1908

Contributions to Medicine and Surgery by the Faculty of the New York Post-Graduate School			1908
Encyclopedia and Dictionary of Medicine and Surgery		Vol. VIII.	1908
Herbert, H.	*Cataract Extraction*		1908
Hewer, Mrs. J. L.	*Our Baby*	11th Ed.	1908
Hutchison and H. Rainey, R.	*Clinical Methods*	4th Ed.	1908
Leduc, S.	*Electric Ions and their use in Medicine.* (Tr. by R. W. Mackenna)		1908
Litchfield, W. F.	*Diphtheria in Practice*		1908
Newman, B. A. Whitelegge and G.	*Hygiene and Public Health*	New Ed.	1908
Osler, W.	*Aequanimitas*	(1)	1905
Parsons, J. H.	*The Pathology of the Eye.*	Vol. IV., Pt. 2.	1908
Rainey, R. Hutchison and H.	*Clinical Methods*	4th Ed.	1908
Sawyer, J.	*Points of Practice in Maladies of the Heart* (1)		1908
Thomson, J.	*Clinical Examination and Treatment of Sick Children*	2nd Ed.	1908
Walsh, J. F.	*History of the Medical Society of the State of New York*		1907
Whitelegge and G. Newman, B. A.	*Hygiene and Public Health*	New Ed.	1908

TRANSACTIONS, REPORTS, JOURNALS, &c.

American Journal of the Medical Sciences, The	Vol. CXXXV.	1908
American Pediatric Society, Transactions of the	Vol. XIX.	1908
Archives de Neurologie	3me ser., Tom. I., II.	1907
British Medical Journal, The	Vol. I. for	1908
Clinical Journal, The	Vol. XXXI.	1908
Edinburgh Medical Journal, The	N.S., Vol. XXIII.	1908
Glasgow Medical Journal, The	Vol. LXIX.	1908
Hospitals—St. Thomas's Hospital Reports	Vol. XXXV.	1908
Lancet, The	Vol. I. for	1908
Medical Record	Vol. LXXIII.	1908
Medical Society of London, Transactions of the	Vol. XXIX.	1906
Münchener medizinische Wochenschrift	Bd. I. für	1908
Nordiskt medicinskt Arkiv		1906
Practitioner, The	Vol. [LXXX.]	1908
Progressive Medicine	Vol. II.	1908
Royal Academy of Medicine in Ireland, Transactions of the	Vol. XXVI.	1908
Scottish Medical and Surgical Journal, The	Vol. XXII.	1908
Tuberculosis, Royal Commission on, Reports	7 vols.	1904—1907

Local Medical Notes.

University College, Bristol.—In examinations recently held :—

M.D. Lond.—*Midwifery and Diseases of Women :* W. J. H. Pinniger.

Inter. M.B. Lond.—H. B. Parker, W. W. Pratt.

Conjoint Board, London.—*Practical Pharmacy :* G. F. Fawn, F. C. Nicholls. *Anatomy and Physiology :* I. Hudleston, S. Marle, V. Pinnock. *Medicine :* *C. Clarke, E. E. Davies, B. Stone. *Surgery :* P. J. Martin, *F. T. Boucher. *Midwifery :* F. C. Morgan, T. B. Dixon.

We have been asked to state that owing to an oversight in the recently issued Prospectus of University College, the name of Dr. Barclay J. Baron, Consulting Physician to the Throat and Nose Department at the Bristol General Hospital, was omitted from the list of the Hospital Staff.

Royal Infirmary.—J. R. Charles, M.D., B.C. Cantab., and J. A. Nixon, M.B., B.C. Cantab., have been appointed Honorary Physicians.

J. M. Fortescue-Brickdale, M.D., B.Ch. Oxon., has been appointed Honorary Assistant Physician.

At the half-yearly meeting of the governors of this institution the medical report stated that during the past six months 1,747 in-patients were admitted and 20,227 out-patients were treated. The daily average number of in-patients was 235. The financial statement showed that the income was £8,420, and expenditure amounted to £8,416. The total adverse balance of the Infirmary is now £3,326.

Medical Inspectors of Schools.—The following have been appointed by the Bristol Education Committee :—T. M. Carter, M.D. Durh., M.R.C.S., L.R.C.P. Lond. ; T. A. Green, M.D., C.M. Edin. ; W. T. Maddison, M.D. Lond., M.R.C.S. Eng. ; E. Cecil Williams, M.B., B.C. Cantab. ; Annie F. M. Cornall, F.R.C.S. Irel., L.R.C.P. Edin.

Hospital Sunday Fund in Bristol.—The total amount contributed to this fund in Bristol for 1908 was £1,859, being £104 in excess of the 1907 collection. £1,776 have been divided amongst the various medical charities of the city.

* Denotes complete examination.